The Online Journal of Distance Education and e-Learning

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Message from the Editor-in-Chief

Dear Colleagues,

The Online Journal of Distance Education and e-Learning (TOJDEL) welcomes you. TOJDEL would like to thank you for your online journal interest. The online journal system has been diffused very fast since January, 2013. It has continued to diffuse new trends in distance education and e-learning all over the world. We hope that the journal will also successfully accomplish our global distance education and e-learning goal. Any views expressed in the journal are the views of the authors and are not the views of the Editor and TOJDEL. We hope that volume 11, issue 1 Chapter 1 will also successfully accomplish our global publication goal. TOJDEL is confident that readers will learn and get different aspects of distance education. Any views expressed in this publication are the views of the authors and are not the views of the Editor and TOJDEL.

The editors of this issue are Prof. Dr. Satish Pawar, Assoc. Prof. Dr. Nilesh Anute, Assoc. Prof. Dr. Amirul Mukminin, Assoc. Prof. Dr. Figen Yaman Lesinger, Assoc. Prof. Dr. Dilan Çiftçi, Assoc. Prof. Dr. İrfan Şimşek, Assist. Prof. Dr. Mustafa Oztunc, Assist. Prof. Dr. Hüseyin Eski, Çiğdem Karagülmez Sağlam & Gamze Peler Şahoğlu. TOJDEL thanks for their valuable effort to review the papers.

TOJDEL will organize INTE-2023 International New Horizons in Education Conference (www.int-e.net) between July 28-29, 2023 in Roma, Italy. This conference is now a well-known education event. It promotes the development and dissemination of theoretical knowledge, conceptual research, and professional knowledge through conference activities. Its focus is to create and disseminate knowledge about education science.

TOJDEL invites your article contributions. Submitted articles should be about all aspects of distance education and e-learning. The articles should be original, unpublished, and not in consideration for publication elsewhere at the time of submission to TOJDEL. Manuscripts must be submitted in English.

For any suggestions and comments on the international on-line journal TOJDEL, please do not hesitate to send mail. TOJDEL is guided by its editors, guest editors and advisory boards. If you are interested in contributing to TOJDEL as an author, guest editor or reviewer, please send your CV to tojdel.editor@gmail.com.

January 01, 2023
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CHAPTER ONE

A COMPARATIVE PERFORMANCE EVALUATION OF TWO STATE COOPERATIVE BANKS

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ABSTRACT
This research paper focused on the comparative evaluation of performance of the two state cooperative banks. The performance evaluation is done using selective key performance indicators. The trend analysis of these evaluation parameters are used to understand the financial position of these banks for a period of 5 years.
The research is based on secondary data. The period of the study is 2017-18 to 2021-22. The research will be helpful for the academicians and students to understand the evaluation of the performance of a bank using specific parameters. It is also helpful for banks in tracking their performances and taking corrective actions in time if required.
Keywords: Key Performance indicators, NPA, CRAR, Interest Spread, ROA, Advances and Deposits.

Introduction

Performance of the banking and finance sector is often considered as an effective measure of evaluating the soundness of economic activities of an economy. Public sector banks in India are always under the surveillance of the apex bank (RBI). They must implement the economic policy decisions for the betterment of the society at large, keeping the profit maximisation motive at stake. They are expected to implement policies related to priority sector lending, financial inclusion etc.

Performance evaluation of the banking and financial sector; acts as a litmus test for the performance evaluation of an economy. With the advent of information technology, the finance sector as like other sectors has undergone a sea change in their work culture. With this changing environment along with the implementation of policy decisions, are the public sector banks in general and Cooperative banks capable of fulfilling the expectations of the government and policy makers along with the fight for survival in the competitive environment is the question.

In the economy with predominance of the agricultural sector, the performance of cooperatives plays a major role. Implementation of policy decisions and rooting the funding towards agriculture and allied sectors is effectively carried out through cooperative banks. Performance evaluation of cooperative banks in such a scenario becomes vital.

This research paper focused on the comparative evaluation of performance of the two state cooperative banks. The performance evaluation is done using selective key performance indicators. The trend analysis of these evaluation parameters are used to understand the financial position of these banks for a period of 5 years. The state cooperative banks play the major role and can be considered as a yardstick for evaluation of performance of cooperative banks. Hence two state cooperative banks are selected for this study.

Objectives of the study

1. To evaluate the performance of two major state cooperative banks, viz Maharashtra State Cooperative bank ltd and Tamil Nadu State cooperative bank ltd. based on selective key performance indicators.
2. To analyse the performance of two selected banks.

Literature Review

There are some researchs in the literature. Sanjeevi and Visakhapatnam (2017) have stated that the operational performance of scheduled commercial banks was found to be better as compared to the non-scheduled banks. However no remarkable difference has been observed in the financial performance of these two types. It has been observed that the commercial banks took higher risk as compared to the non-commercial banks.

Bhatt and Bhatt (2013) studied the performance of cooperative banks of Jammu and Kashmir based on different performance evaluation parameters. It has been observed that these banks had insufficient self-generated funds leading to reliance heavily on debt funds. Ineffective management of loans and advances caused high NPA, which affects the performance efficiency of these banks.
Vaidyanathan, (2013) was intended to analyse different aspects of cooperative credit societies, using the data of a period of 20 years. The author has identified the training needs of the employees of cooperative societies with

respect to computerisation. The author has suggested treating well managed societies as role models for others. Further the author has suggested forensic audit of loans and advances and impose penalties for gross negligence.

Nayak (2012) reveals that the Indian economic growth is not inclusive as considerable inequalities were found in the consumption pattern of the society; though the growth in GDP is followed by the growth in real GDP per head per annum. In the opinion of the author cooperative banks proved to be a better option as compared to commercial banks in the process of achieving inclusive growth.

Indira. (1993) found the financial performance of cooperative banks of Tumkur district has been analysed using "CAMEL" analysis technique. The unprofessional approach and poor decision making were the two major weaknesses of these cooperative banks.

Misra and Aspal (2013) used the "CAMEL" model for evaluating performance of SBI and its 5 subsidiaries. No significant difference has been observed in the overall performance of these banks though the CAMEL ratios differed from bank to bank.

Mohiuddin (2014) analysis of PCB and NCB banks of Bangladesh were carried out using the "CAMEL" model. The author found both the banks financially viable and with sound management practices.

Srinivasan (2016) studied a comparative performance analysis of 25 public sector banks, 18 private sector banks and 8 foreign banks was carried out using CAMEL analysis. ANOVA analysis has been used to find the significant difference in each of the 5 composite CAMEL ratios with respect to the three types of the banks. The author has concluded that there is a significant difference within and between the three groups of banks.

Rohtas (2018) studied a comparative financial performance analysis study of selected private banks
The study is based on the comparative analysis of three major private banks viz ICICI, HDFC and Axis bank. The author concluded that the ICICI lagged the other two counterparts in generation of return on assets. HDFC bank supersedes the other two in managing the NPA. However ICICI generates more profit and business per employee compared to other banks

Das and Sen (2010) analysed the performance of state cooperative banks. The criteria used for the analysis are the profitability and quality of assets. Different ratios as parameters of performance evaluation are used for the study. The authors concluded that the profit being treated as a secondary objective of these banks as service to members is the prime objective of the cooperative sector. These banks are also facing the problem of NPA as the commercial banks and due care is to be taken for the survival and sustenance of these banks.

Research Methodology
The research work is a descriptive research, based on secondary data collected from the websites of the two banks and extracted from the financial statements of these banks.
The period of the study is 5 years: Financial data for 2017-18 to 2021-22 is used for the study. The terms MH and TN used in the graph indicate: 1. MH: Maharashtra State Cooperative Bank ltd and TN: Tamil Nadu State Cooperative Bank Ltd. The key indicators (in the form of financial ratios) ,being used to evaluate the performance of these banks.

Data Analysis:
Capital to Risk (Weighted) Assets Ratio (CRAR):
In performance evaluation of banks, Capital adequacy is the major parameter of evaluation. The ratio evaluates the adequacy of the capital in relation to its fiscal requirement. It tests the fiscal fitness of the bank. As per RBI guidelines the banks have to maintain capital to risk weighted assets ratio of 9%. The higher the ratio, the better is the risk coverage.

I) CRAR Ratio					
	1	2	3	4	5
Year	17-18	18-19	19-20	20-21	21-22
MH	0.1657	0.156	0.1311	0.1434	0.157
TN	0.1628	0.1505	0.1197	0.1723	0.1181

Table No 1: CRAR Ratio

1. CRAR Ratio

	17-18	18-19	19-20	20-21	21-22
■ I) CRAR Ratio MH	16,57%	15,60%	13,11%	14,34%	15,70%
■ I) CRAR Ratio TN	16,28%	15,05%	11,97%	17,23%	11,81%
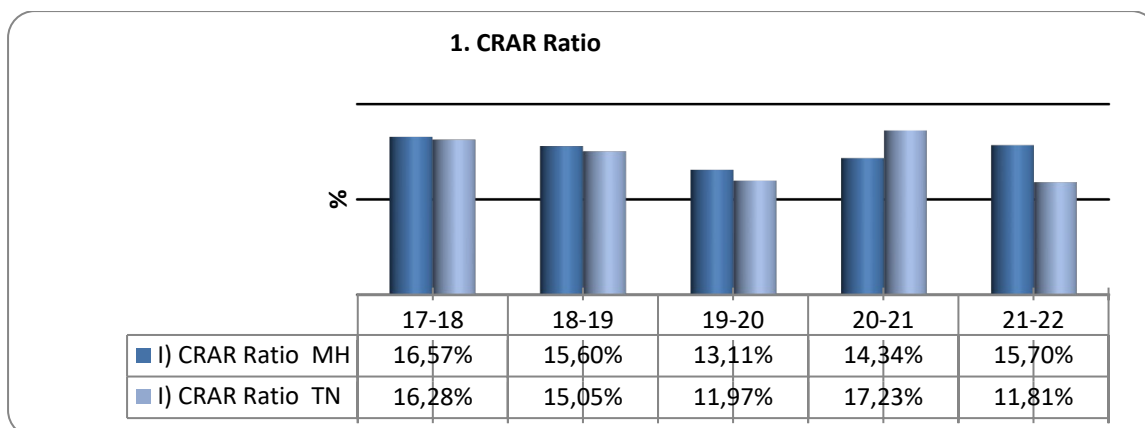
Graph No. 1: CRAR Ratio

Comment: Both the banks have CRAR far above the expected requirement. The deviations in the ratio of Tamil Nadu State cooperative bank found to be more as compared to the Maharashtra State cooperative bank.

Gross Non Performing Assets Ratio (Gross NPA %)
Gross NPA is the ratio of nonperforming assets to total loans and advances Normally Gross NPA of 3% is manageable for a bank. The lower the Gross NPA ratio the better it is for the bank.

II) GNPA %					
	1	2	3	4	5
Year	17-18	18-19	19-20	20-21	21-22
MH	9.91%	8.07%	10.80%	11.64%	10.96%
TN	4.51%	2.85%	2.69%	4.10%	2.76%

Table No. 2: GNPA %

2. Gross NPA

	17-18	18-19	19-20	20-21	21-22
■ II) GNPA % MH	9,91%	8,07%	10,80%	11,64%	10,96%
■ II) GNPA % TN	4,51%	2,85%	2,69%	4,10%	2,76%
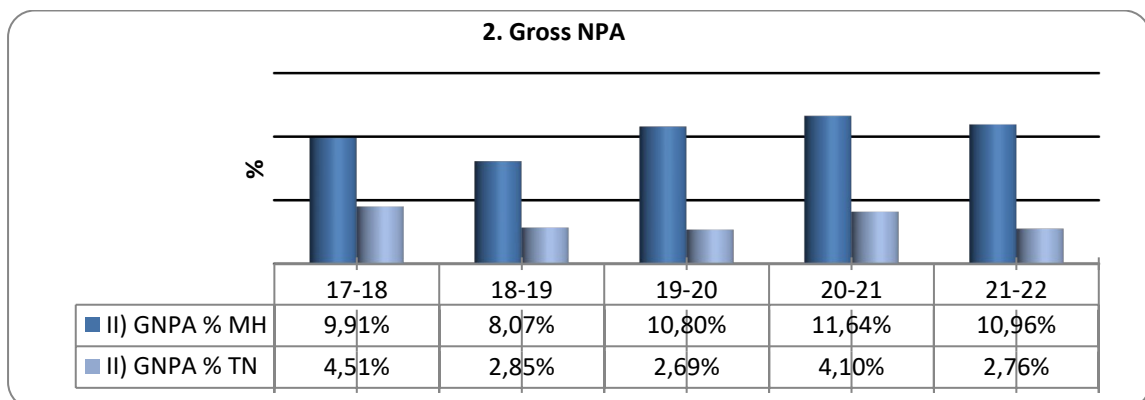
Graph No. 2: GNPA %
Comment: The Tamil Nadu State Cooperative bank is having the ratio close to the manageable limit. Whereas the Maharashtra State cooperative bank's NPA is far above the expected manageable limit.

Net NPA%
The Net NPA is calculated by subtracting the provisions made by the bank from the gross NPA. The Net NPA of banks in India in 2021-22 was found to be around 2.3%. The lower the Net NPA ratio the better it is for the bank. The net NPA ratio of Indian banks was around 2.3% in the financial year 2021-22

III) Net NPA %					
	1	2	3	4	5
Year	17-18	18-19	19-20	20-21	21-22
MH	2.48%	1.81%	0.00%	1.20%	0.00%
TN	0.00%	1.17%	1.42%	2.58%	1.70%

Table No 3: Net NPA %

3. Net NPA

	17-18	18-19	19-20	20-21	21-22
■ III) Net NPA % MH	2,48%	1,81%	0,00%	1,20%	0,00%
■ III) Net NPA % TN	0,00%	1,17%	1,42%	2,58%	1,70%
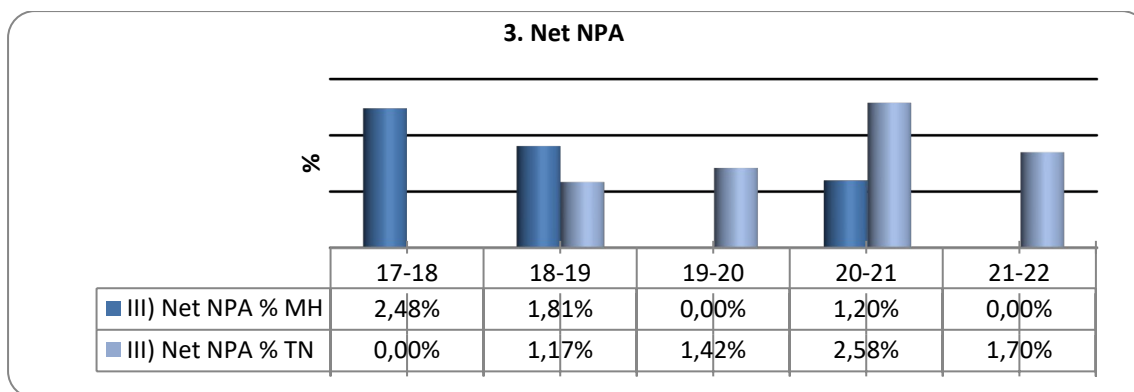
.Graph No. 3: Net NPA %

Comment: The Maharashtra state cooperative bank has made the provisions to bring its Net NPA to the manageable limit though the Tamil Nadu State Cooperative Bank has better Net NPA ratio as compared to the Maharashtra state cooperative bank.

Business per Employee
This is an efficiency ratio, evaluating the productivity and efficiency of the bank's workforce.
Higher ratio indicates better utilization of human resource by the bank. For service sector, where human resource plays a vital role, this efficiency ratio helps to evaluate the performance of the organization.

IV) Business per Employee (Rs. In Corers))					
	1	2	3	4	5
Year	**17-18**	**18-19**	**19-20**	**20-21**	**21-22**
MH	25.92	32.63	42.91	51.91	65.22
TN	44.61	54.64	76.89	44.36	66.28

Table No. 4: Business per Employee

Business per Employee

	17-18	18-19	19-20	20-21	21-22
■ IV) Business per Employee (Rs. In Crores)) MH	25,92	32,63	42,91	51,91	65,22
■ IV) Business per Employee (Rs. In Crores)) TN	44,61	54,64	76,89	44,36	66,28
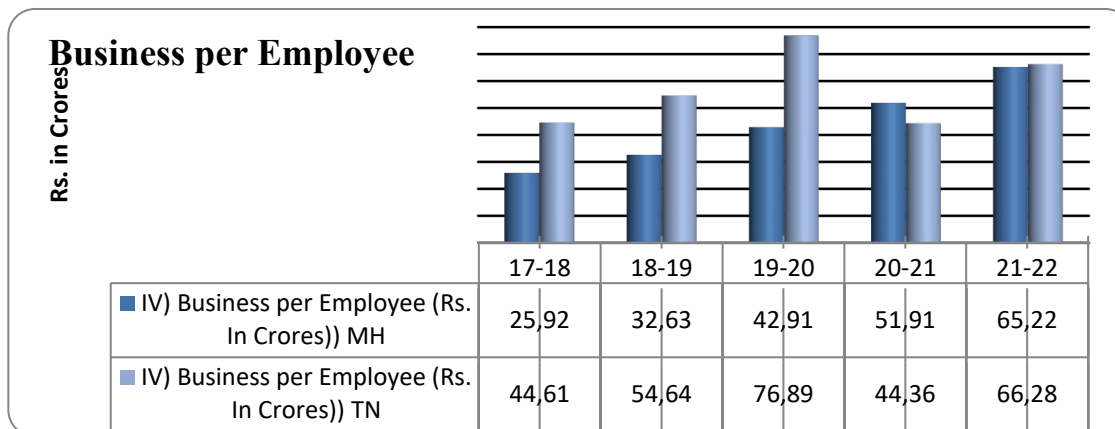
Graph No. 4: Business per Employee

Comment: The Maharashtra state cooperative bank shows a continuous improvement in the employee efficiency. Though the five years average ratio for the Tamil Nadu State cooperative is higher, it shows a fluctuating trend.

Profit per Employee:
This ratio explains the earning per employee reflecting the efficiency of the human resource. The more efficient and productive the human resource more will be the earning per employee. However, the earning is not solely influenced by the productivity of human resource, the ratio to be used with other financial indicators to test the overall efficiency of the organization.

V) Profit per Employee (Rs. In Corers)				
	1	2	3	4	5
Year	**17-18**	**18-19**	**19-20**	**20-21**	**21-22**
MH	0.17	0.23	0.33	0.43	0.84
TN	0.25	0.27	0.29	0.34	0.54

Table No 5: Profit per Employee

Profit per Employee

	17-18	18-19	19-20	20-21	21-22
■ V) Profit per Employee (Rs. In Crores)) MH	0,17	0,23	0,33	0,43	0,84
■ V) Profit per Employee (Rs. In Crores)) TN	0,25	0,27	0,29	0,34	0,54
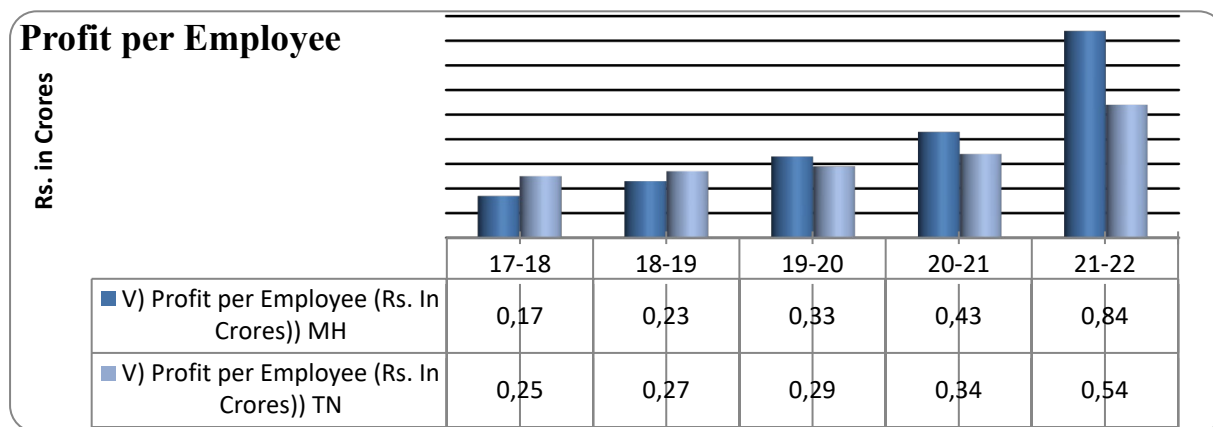
Graph No. 5: Profit per Employee

Comment: As like business per employee, this ratio also shows an increasing trend and becomes double than the previous year in case of the Maharashtra state cooperative bank. In case of the Tamil Nadu cooperative bank the ratio is lower than the Maharashtra state cooperative bank.

Interest Spread:

It is the difference between the lending and borrowing rates. Here the Interest spread is taken as the difference between the interest earned and interest expended. The higher the spread the better it is. This is the major contributor of the earnings of the bank.

VI) Interest Spread(Rs. In crores)				
	1	2	3	4	5
Year	**17-18**	**18-19**	**19-20**	**20-21**	**21-22**
MH	579.08	615.25	889.11	860.19	1526.92
TN	-307.83	-250.31	-222.42	-228.85	-242.10

Table No. 6 Interest Spread

6. Interest Spread

	17-18	18-19	19-20	20-21	21-22
■ VI) Interest Spread(Rs. In crores) MH	579,08	615,25	889,11	860,19	1526,92
■ VI) Interest Spread(Rs. In crores) TN	-307,83	-250,31	-222,42	-228,85	-242,10
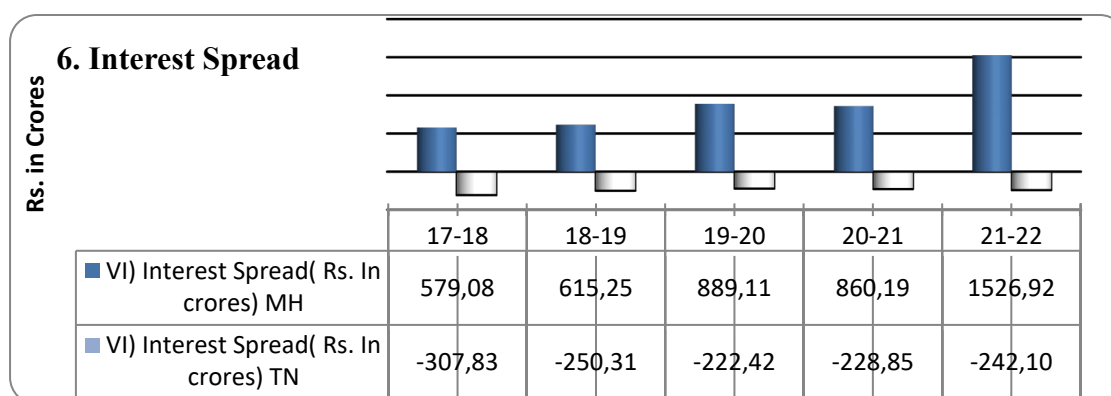
Graph No. 6: Interest Spread

Comment: The Maharashtra state cooperative bank shows a positive interest spread with increasing trend. However the Tamil Nadu state cooperative bank has a negative spread, the interest expenses found to be more than their interest income which is not a good sign.

Return on Assets:

This ratio is the key indicator in analysis of performance of any organization. It reflects the efficiency or inefficiency of the firm in utilizing their scarce resources. The higher ratio indicates better utilization of the resources by the organization.

VII) Return on Asset					
	1	2	3	4	5
Year	**17-18**	**18-19**	**19-20**	**20-21**	**21-22**
MH	0.78	1.04	1.1	1.1	2.02
TN	0.61	0.59	0.51	0.72	0.89

Table No.7: Return on Asset

7. Return on Assets

	17-18	18-19	19-20	20-21	21-22
VII) Return on Asset MH	0,78	1,04	1,1	1,1	2,02
VII) Return on Asset TN	0,61	0,59	0,51	0,72	0,89
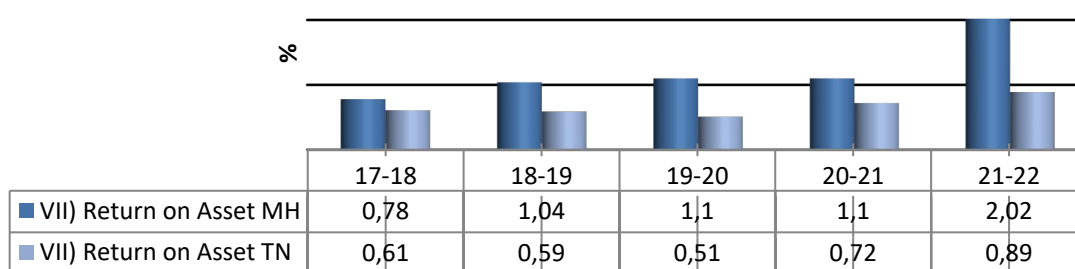
Graph No. 7: Return on Asset

Comment: The ROA of both the banks shows an increasing trend. However the Tamil Nadu state cooperative bank has a lower ROA as compared to the Maharashtra state cooperative bank.

Ratio of Loans and Advances to Deposits:

This is a measure to test the liquidity of a bank. Too high ratio reflects too low liquidity, while too low ratio indicates high liquidity but low business.

VIII) Loans to Deposit Ratio					
	1	2	3	4	5
Year	17-18	18-19	19-20	20-21	21-22
MH	113.37	123.74	99.85	114.71	123.23
TN	76.72	96.16	94.99	79.88	119.75

Table No 8: Loans to Deposit Ratio

8. Loans and Advances to Deposit Ratio

	17-18	18-19	19-20	20-21	21-22
VIII) Loans to Deposit Ratio MH	113,37	123,74	99,85	114,71	123,23
VIII) Loans to Deposit Ratio TN	76,72	96,16	94,99	79,88	119,75
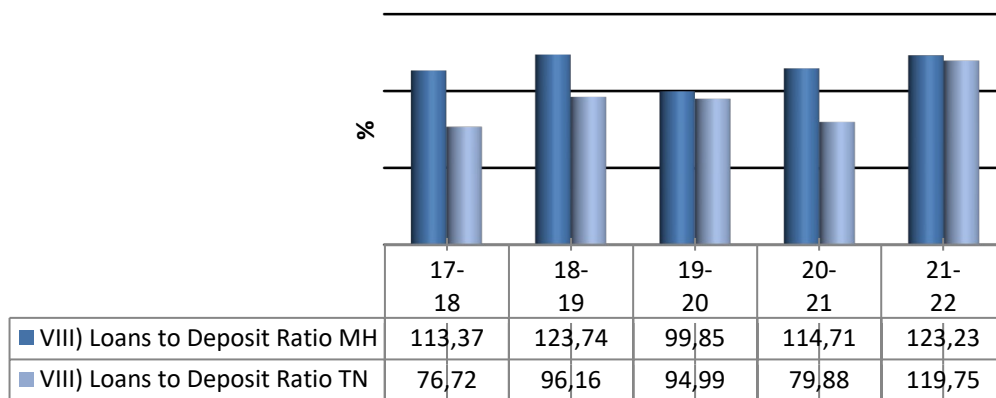
Graph No. 8: Loans to Deposit Ratio

Comment: Both the banks have too high ratios particularly in 2021-22 indicating low liquidity. The Maharashtra state cooperative bank shows high ratio throughout the period of 5 years indicating low liquidity.

Conclusion

Performance evaluation of the banking and financial sector; acts as a litmus test for the performance evaluation of an economy. With the advent of information technology, the finance sector as like other sectors has undergone a sea change in their work culture. With this changing environment along with the implementation of policy decisions, are the public sector banks in general and Cooperative banks in particular capable of fulfilling the expectations of the government and policy makers along with the fight for survival in the competitive environment is the statement of problem for the study. Both the banks on an average are almost at par in case of some of the indicators like CRAR, Gross and Net NPA ratios and the efficiency ratios like profit and business per employee. However the interest spread of the Tamil Nadu State cooperative bank is negative during the period of the study which is not a good sign. The Maharashtra State cooperative bank supersedes the Tamil Nadu State cooperative bank even in case of ROA and loan to deposit ratios.

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A DECADE OF DISTANCE EDUCATION RESEARCH IN INDIA A BIBLIOMETRIC REVIEW

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ABSTRACT
Distance Education which is also considered as distance learning is the type of learning where students are not physically present in the classroom. Distance learning has become popular in last decade with the rise of the internet. This study focuses on the research outputs by the Indian authors in distance education. India has seen a surge in distance education in last decade and also experienced the rise in the research towards the distance education domain. The study has observed that the research in the field of distance education has almost doubled since 2020. The Covid-19 pandemic has made a positive impact in the research of distance education. So, the authors have done a bibliometric study on distance education for the decade. Bibliometric analysis gives us a trend of research on a particular topic. It is also useful for understanding the gap among the current research studies. This bibliometric study provides various research themes in distance learning which can be considered by the researchers for their future research.
Keywords: Distance Education, Distance Learning, Research in Distance Education, Bibliometric Review.

Introduction

Education field and the formal learning process remained the same for many decades. Knowledge transfer inside of the classroom from teacher to students was a common way of education. This method has been vastly used for decades by most of the countries. This method has various problems such as the need for physical availability of students in the classrooms, huge infrastructure requirements for schools and colleges, requirement of transportation for students, rigid timings etc.

Distance learning or distance education evolved as a solution. Various developing countries like India have accepted the distance learning mode of education. It is gaining popularity in India. The flexibility of learning provided by distance education is the key factor for the distance education.

The popularity of distance education in India has attracted various researchers to consider this domain of research. Indian researchers started contributing towards distance education research in the last decade. The last five years have seen a hike in the research in the field of distance education.

Bibliometric analysis is one of the popular research techniques which is useful for analyzing large volumes of research data. This is useful in finding the existing research stage and new research avenues in a particular domain. Performance analysis, mapping and network analysis etc. is done under the scope of bibliometric analysis. Data visualization is one of the popular outputs of bibliometric studies.

This bibliometric research is focused on identifying the current level of research in distance learning. It is useful for future researchers to see the current level of research and to easily find out the gap in existing research. This research can become a steppingstone for further research in the area of distance education.

Review of Literature:

Mubarak Al-Khatir and Al-Arimia (2014) studied the e-learning facility available for the students. E-learning have adaptability as per the need of the students. It has more variety in the teaching learning process. E-learning is suitable for distance education. The technology should be used significantly in distance education.

Joi. Moore, Deane and Galyen (2011) studied various environments for e-learning, online learning and distance learning. They have identified the differences between these learning methods. Distance learning is a platform where the educational material is transferred in the print as well as educational format.

Valentine (2012) discussed various possibilities and problems in distance education. The educational quality under distance learning is considered as a main issue. Various hidden costs involved in distance learning are considered a problem by the students. Attitude of students, faculty members and administration staff is also a problem in the adoption of distance learning.

Bubuselic (2012) explained various concepts in distance learning. Distance learning is a learning method where teaching-learning is not done in a classroom but done with the help of technology. Distance learning was initially done with the help of postal services. Today, the internet and electronic devices are used for distance learning. Preparedness of the student for the classes is a main issue identified by the researcher. Social isolation of the students is also an issue in distance learning.

Tibaná-Herrera, Fernández-Bajón, and Moya-Anegón (2018) has done a bibliometric analysis for e-learning. They have a year-wise research output and identification of top journals in the e-learning domain. The related keywords were identified and analyzed with the help of VOS viewer for getting meaningful output.

Abubakar, Harande, and Abubakar (2009) explained the process of e-learning as a teaching learning process with the electronic devices. E-learning has become popular in the world. It is widely accepted all over the world. It is used in developing countries.

Adeniji (2019) has done a bibliometric analysis of learning analytics. It has analyzed the data of various years and identified the list of most prolific authors, highly productive research institutes, highly productive journals, research themes etc. VOS viewer has been used as a tool in this bibliometric study.

Amoozegar, Khodabandelou, and Ebrahim (2018) studied various trends in the research of distance education. The bibliometric study is focused on the available research data from 1980-2016. This research is a foundation for the future research in the field of distance education research.

Chiang, Kuo, and Yang (2010) did a bibliometric analysis on the e-learning topic with the help of SSCI database. It has considered research studies from 1967 to 2009. It found out that the research output in the field of e-learning is increasing. The majority of research output in the field of e-learning is by multiple authorship papers

Djeki, Degila, and Bondiombouy, Alhassan (2022) did a bibliometric study on the e-learning topic. It has considered the research from 2015 to 2022. The research identified the USA, Spain, England, and China as most productive countries in the field of e-learning.

Yin (2022) presented a model of virtual reality based on artificial intelligence. It concludes that the learning will be enhanced when it is tested with a multidimensional approach by the learner.

Babacan & Yuvarlakbas (2022) studied the impact of Covid-19 pandemic on digitalization in education. Digitalization of education has various advantages like flexibility of time, time saving etc. It has few drawbacks which includes less attention and student preference is for classroom teaching more than digitized form of teaching.

Zabolotska & Bakhov (2022) discussed the effectiveness of distance education. According to the investigation's findings, both the number of educational websites visited on public platforms and the degree of student autonomy when completing assignments are dramatically rising.

Objectives:
1. To find out research publication trend in Distance Education
2. To identify popular articles in the field of Distance Education
3. To find out various research themes in the Distance Education research for future research

Research Methodology:

Availability of data is essential for any research. Researchers have used Scopus database for this study. Scopus is one of the best databases with high quality research papers. Hence, this research is based on the research articles indexed by Scopus.

The researchers made a search query for 'Distance Education' on the Scopus database in January 2023. The search with the 'Distance Education' keyword was done with filters like title, abstract, keywords, publication year, publication stage, country/territory etc. Research in India is only considered from 2013 to 2022 for this study. Researchers finally collected data of 959 research articles which were used for the study.

The data was exported in the 'CSV' format and analysis was done with the help of MS-Excel software. A data visualization tool, VOS viewer was used for data visualization in graphical format.
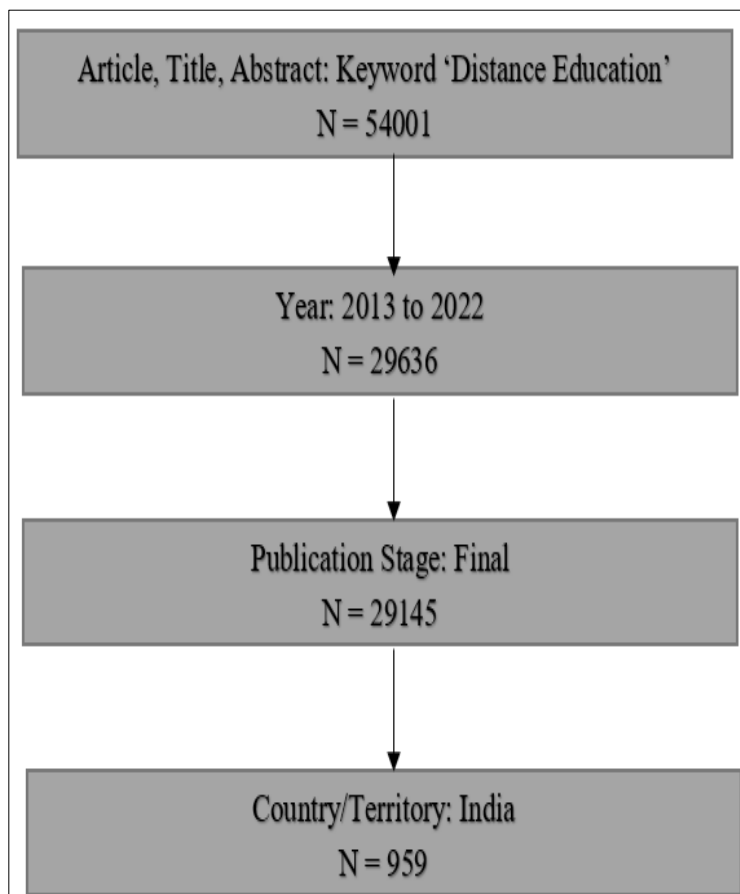
Figure 1. Search Query for Data Collection

Data Analysis & Discussion:
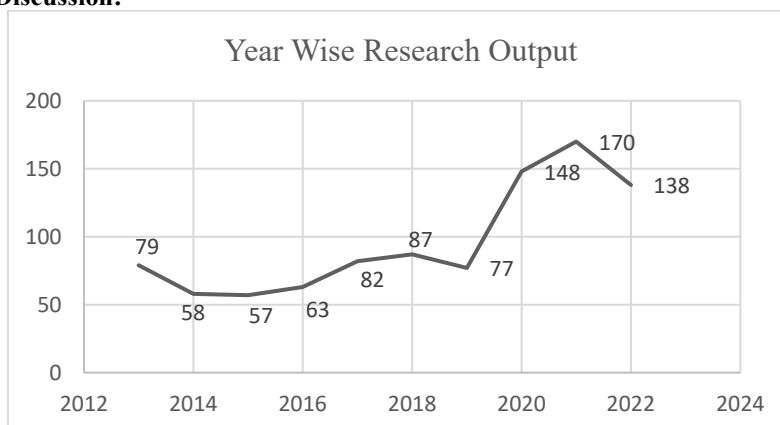
Figure 2. Year Wise Research Output

Figure 2 shows the research output for 'Distance Learning' from India over the decade. It clearly shows that the research from the year 2013 to 2018 was at a low pace which was doubled from the year 2020. This indicates the interest of Indian researchers towards research in 'Distance Learning' field.

Sr. No	Document	Citations
1	palvia s. (2018)	237
2	gope p. (2018)	117
3	kaup s. (2020)	110
4	agarwal s. (2020)	107
5	gao w. (2017)	107
6	yang d. (2018)	96
7	singh k. (2020)	94
8	dror d.m. (2016)	77
9	goel a. (2020)	78
10	momtazmanesh s. (2020)	73

Table 1. Top 10 Cited Articles on 'Distance Learning'

Table 1 indicates the top 10 cited research articles on 'Distance Learning' theme. Highest cited research paper has 237 citations.

Figure 3 indicates the linking between various keywords considered in 'Distance Learning' studies. Figure 4 indicates the year wise research output in 'Distance Learning' studies. Figure 5 indicates the density of keywords in the 'Distance Learning' studies. The size of color patches indicates the frequency of keywords.
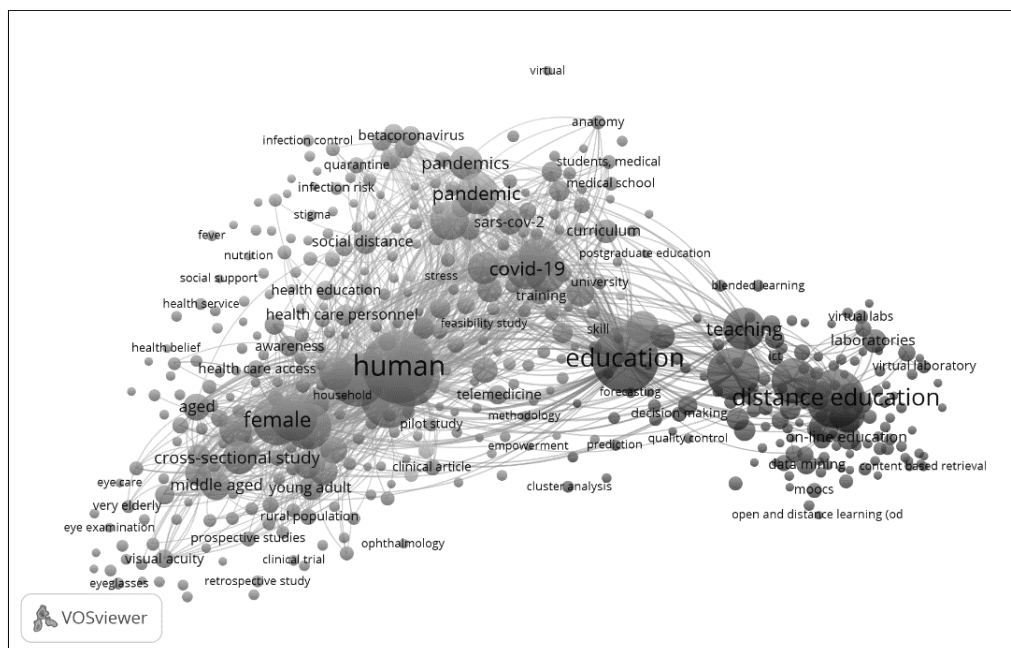
Figure 3. Network Visualization for Distance Learning
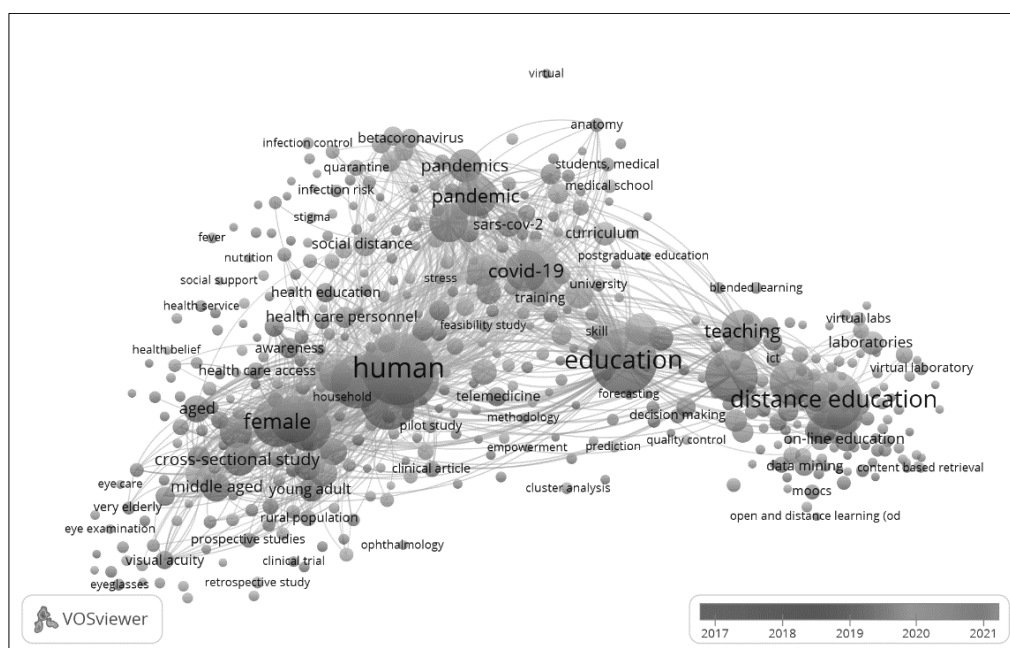
Figure 4. Distance Education Overlay Visualization

Figure 5. Distance Education Density Visualization

The entire keyword data is analyzed and visual interpretation gives six clusters of keywords. Figure 6 indicates the biggest cluster 1 with 149 items. This includes academic performance, active learning, application programs, artificial intelligence, augmented reality, big data, blended learning, capacity building, cloud computing, cluster analysis, collaborative learning, distance education, distance e-learning, data mining, decision making, distance education system, e-leaning, education, education system, engineering education, higher education, intelligent computing, internet of things, laboratory education, learning management, machine learning, mobile learning, online learning, online education, open and distance learning etc.
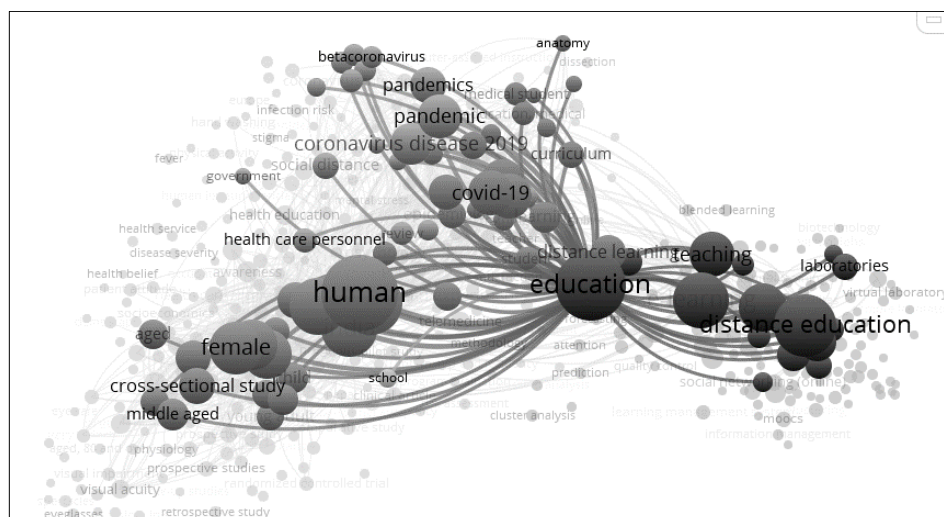
Figure 6. Network Visualization for Cluster 1

Figure 7 indicates cluster 2 with 140 items. It includes clinical trial, age distribution, attitude to health, awareness, child, child preschool, clinical article, controlled study, demography, distance, human, education, teaching, educational status, financial management, follow-up, health belief, group by age, health service, human, patient care, prescription, priority journal, primary medical care, quality of life, retrospective study, telemedicine, treatment outcome etc.
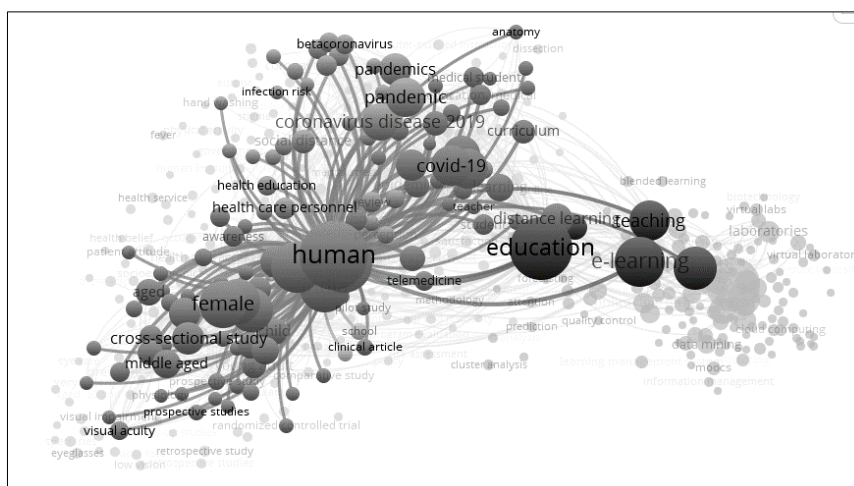
Figure 7. Network Visualization for Cluster 2

Figure 8 indicates cluster 3 with 82 items. This mainly includes pandemic, pandemics, beta coronavirus, coronavirus, coronavirus infection, developing countries, economic aspect, economics, fever, global health, government, health care facility, health care personnel, health education, health promotion, health survey, infection control, isolation, leadership, lockdown, medical research, mental health, mortality rate, parental care, public health, public health care, social distance, social isolation, vaccination etc.
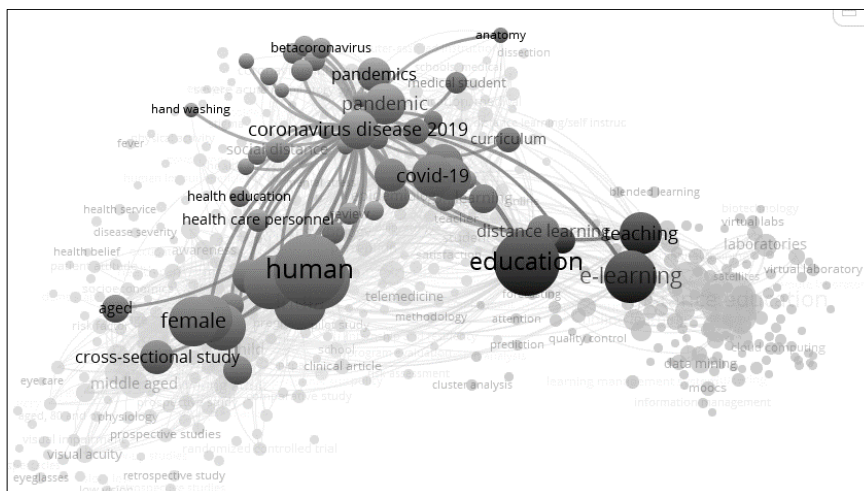
Figure 8. Network Visualization for Cluster 3

Figure 9 indicates cluster 4 with 73 items. This mainly includes academic achievement, clinical competence, computer assisted instructions, dental education, curriculum, distance learning, education program, distance education, medical education, educational measurement, human experiment, medical education, medical student, methodology, pilot project, pilot experience, residency education etc.
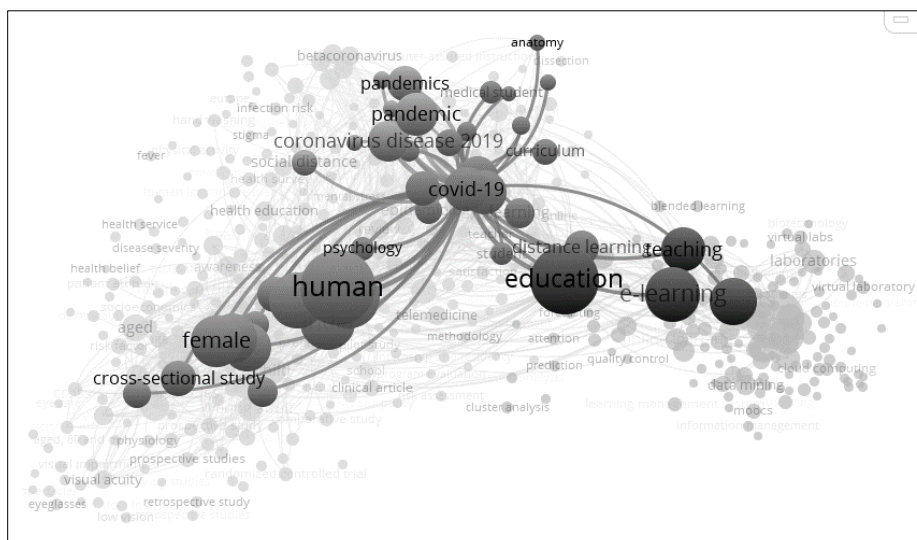
Figure 9. Network Visualization for Cluster 4.

Figure 10 indicates cluster 5 with 11 items. This mainly includes attitude, barriers, Covid-19, exercise, healthcare, interpersonal communication, mental stress, online, school, schools, stress etc.
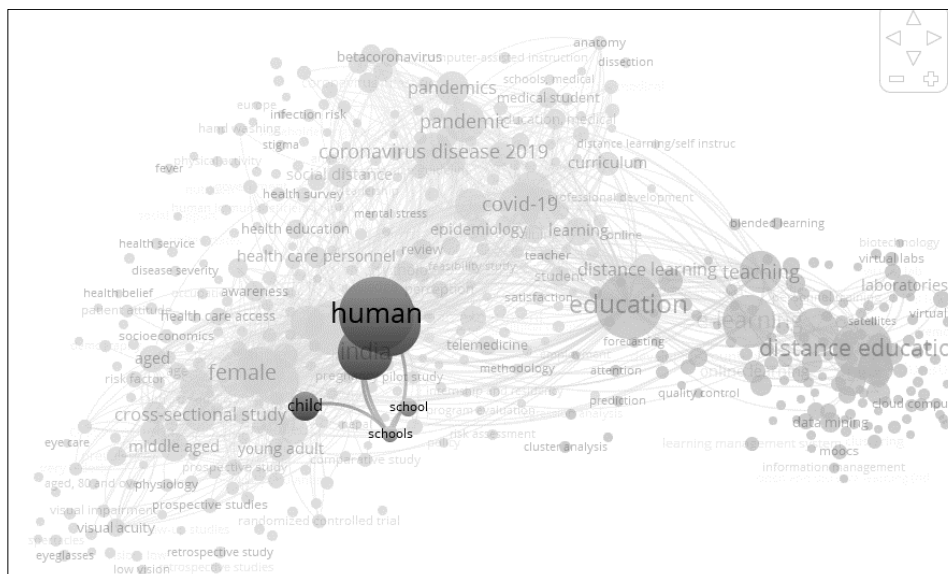
Figure 10. Network Visualization for Cluster 5

Figure 11 indicates cluster 6 with only 2 items. This cluster includes program evaluation and social network.
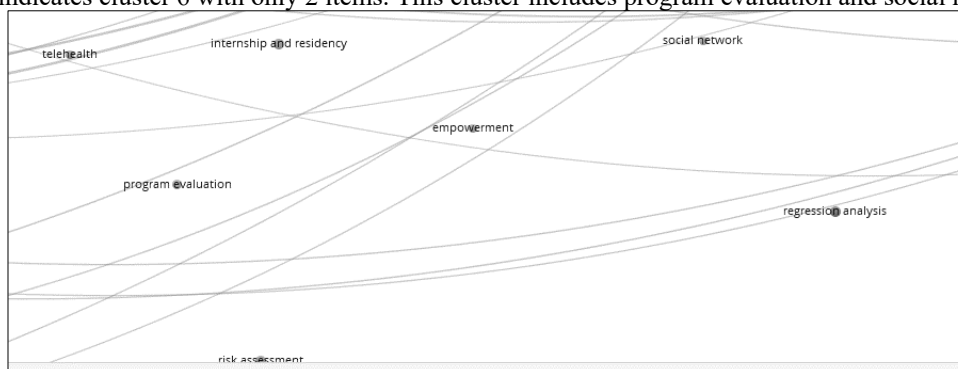
Figure 11. Network Visualization for Cluster 6

Findings:
The researchers found various insights through this study. Following are the findings.
- The research in the field of Distance Learning is increasing. The pandemic has made a positive impact on the research in the field of 'Distance Education'. The researchers have mainly found out the impact of pandemic on education.
- The researchers found various clusters which are the key themes used by the earlier researchers. Clusters are important to understand the future scope of the research.
- Cluster one is mainly about the impact of Covid-19 pandemic on education. It considers various aspects of education during the pandemic. It also considered the role of health care professionals during pandemic.
- Cluster two mainly focuses on medical education and pandemic. It is focused on medical treatment, age, attitude in education etc.
- Cluster three is focused on cross sectional studies done. It focuses on social distancing, health services, mental health etc. during the Covid-19 pandemic.
- Cluster four is focused on the psychological aspects of the Covid-19 pandemic on the learning process. It is focused on students, medical students, medical education etc. It considers the teaching and teachers point of view.
- Cluster five is focused on the attitude of students, online education, online schools, mental stress faced by the students etc. Cluster six is the smallest cluster which is focused on evaluation of educational programs and impact of social networks.

Conclusion:
The research in the field of 'distance education' is increasing rapidly. The research was steady for the initial period but has taken a plunge since 2020. The study has identified six clusters which can be considered as themes of study. The existing research on the topic of distance education mainly revolves around education,

distance education, e-learning, Covid-19 pandemic etc. The Covid-19 pandemic has made an impact on the studies conducted towards distance education. The researchers mainly focused on the need, availability and situation of 'distance education' because of the pandemic. Future research should be conducted for finding the effectiveness and drawbacks of 'distance education'. Future researchers can consider social networking, problems in distance learning, impact of online learning, effectiveness of online learning, mobile learning and blended learning etc. as the themes for their research. The research in the field of distance learning will keep on growing as the distance learning field grows.

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A LITERATURE REVIEW STUDY ON: ANALYSING ROLE OF FINTECH IN SUSTAINABLE BANKING IN PUNE REGION IN INDIA

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ABSTRACT
The aim of this study is to collect data from secondary sources related to the research topic, such as journals, websites, government publications, annual reports of businesses, research papers, and research reports. The goal of the current research is to identify the role of FinTech in sustainable banking through a comprehensive assessment and analysis of the literature. The present study is based on secondary research. It was highlighted that numerous academics have investigated the effects of novel, developing technologies on the expansion of the banking industry, as well as the use of technological tools by cooperative, public, and private banks. This review article seeks to consolidate previous research on Fintech and its importance for the banking sector in order to comprehend the state-of-the-art literature linked to it. This literature review can establish a forum for further research.
Keywords: FinTech, Banking sector, financial services.

Introduction
In an increasingly digital world, financial technology (FINTECH) has been a key player in revolutionizing the banking sector. It has enabled access to more efficient and secure financial services for customers, and it has opened up business opportunities for banks too. But what does FINTECH mean for sustainable banking? Can it really help banks reduce their environmental footprint and work towards a more sustainable future? In this blog post, we will explore how FINTECH is enabling banks to shift towards sustainable banking and how it can be used to create a more responsible banking industry.

The role of technology in banking is constantly evolving, and fintech is playing a major role in shaping the future of the industry. From mobile banking and payments to blockchain and AI, fintech is helping banks become more efficient, secure and sustainable.

Fintech can help banks reduce their environmental impact by making operations more efficient. Mobile banking apps can help reduce paper use, and digital identity verification can help reduce travel for bank staff. Blockchain technology can also help reduce fraudulent activity, which can save banks money and resources.

In addition to being more efficient, fintech can also help banks become more sustainable by supporting green initiatives. For example, some fintech companies are developing products that allow customers to track their carbon footprint or make environmentally-friendly investments. By using fintech to support sustainable practices, banks can show their commitment to the environment and build trust with customers.

A literature review is an essential part of any research project. It is a critical evaluation of existing research studies, books, journal articles and other related sources. Through a literature review, researchers can gain an understanding of the existing knowledge on a given topic as well as identify areas for potential research. A thorough and comprehensive literature review is important for both student researchers and professionals to understand the current state of knowledge on their chosen subject and to form the basis for further study.

Importance of Literature Review
A literature review is a comprehensive overview of all the knowledge available on a specific topic, ranging from early research to current developments. It serves several purposes:

- To help develop new hypotheses or identify gaps in existing research
- To provide a theoretical framework for future research

- To provide context for understanding current research findings
- To identify areas in need of further study
- To guide decision-making about design and methodology in future studies

Kapoor & Roy (2017) studied that a seismic upheaval has occurred in the financial services industry, affecting firms, technology, engagement, regulation, and services. This industry, which was once controlled by banks and NBFCs, is being systematically unbundled, allowing for the emergence of specialised companies and market development. Prior to the Jan Dhanprogramme, 60% of Indians lacked bank accounts, and 90% of small businesses lacked access to formal finance. Given that 75% of Indians already hold a cell phone, it seems obvious that digital banking would do better than web banking. The JAM trinity, whose elements are supposed to bank the unbanked in the most economical way possible, is made up of the well-intentioned movement toward Jan Dhan, Aadhaar, and a financial system tightly linked digitally on mobile phones. Financial enterprises are also utilising technology.

Carlin, Olafsson & Pagel (2019) examine the impact of a financial aggregator's release of a mobile app, which makes it easier for their customers to obtain information and make wise decisions in two ways. In the beginning, it reduces search expenses and makes discovering personal information simpler. It also increases the importance of financial information. In retail financial markets, this latter process is crucial for customers.

Bittar (2019) observed that FinTech businesses are a hot topic right now in the financial industry. Despite the paucity of research on FinTech firms and their effects on financial institutions, this study sought to determine the effect that FinTech firms are having on Swedish financial institutions. The regular news and discussions regarding FinTech businesses, and their future sparked our interest in this subject. Previous studies regarding FinTech businesses did not consider their effects on financial institutions or what may happen to them in the future. As a result, a key question that needed to be addressed was highlighted by the topic's marginalisation and paucity of research.

Vijai (2019) studied that India's financial services business is changing due to the fintech sector, which is expanding at the fastest rate in the world. According to NASSCOM, the Indian fintech software industry is expected to grow from its current USD 1.2 billion to USD 2.4 billion by 2020. The historically cash-based Indian economy has reacted favourably to the fintech possibility, which was largely brought on by an increase in e-commerce and widespread smartphone use.

Karsh & Abufara (2020) observed that FinTech businesses all around the world are upending the banking sector by providing digital financial goods and services on user-friendly platforms for both consumers and financial institutions. FinTech businesses are divided into a variety of categories, including digital wallets, insurance, payments, and crowdfunding. The financial industry is paying attention to the changes and disruptions, even though they are small. The banking sector must adapt its business practices to make use of digital technologies or risk losing its competitive edge.

Legowo, Subanidja & Sorongan (2020) find that it is a novel approach to study that aims to create a research model using "mixed methods" with the main goal of creating a sustainable development model based on FinTech in Indonesia's financial and banking sector. The key findings showed that FinTech, which is affected by business forces, influences sustainable growth in Indonesia's financial and banking sectors. Future studies on the FinTech model must look at its impacts on long-term bank performance in the Indonesian financial and banking sectors.

Thakor (2019) examined that Numerous concerns relating to P2P lending, cryptocurrency, and smart contracts have also been explored throughout this process. Four main questions have been used to frame the discussion of these topics. First, how should conventional intermediation, shadow banks, and fintech be incorporated into our theories of financial intermediation? Here, I've outlined some ideas for the structure and content that such a theory should have, emphasising the importance of trust in setting banks apart from their new rivals. Second, how will fintech impact the credit markets, deposits, and capital raising? Fintech Facilitates the Sustainable Development of Green Finance in China: Cases and Outlook (March 2020) they observed that the insurance sector has improved its ability to manage environmental and climatic risk, increased its capacity to deliver services and encouraged the sustainable development of communities by implementing fintech in damage assessment and claim settlement procedures. The smart remote damage assessment and claim settlement system for disaster and flood insurance has improved efficiency in damage assessment and claim settlement while decreasing labour expenses since it was introduced in Ningbo.

Hammadi & Nobanee (2020) examine and analyse "fintech and sustainability," a brand-new phenomenon in the financial industry. To examine this subject, nine articles have been chosen and summarised; the goal of this process is to give readers a better understanding of the subject of "fintech and sustainability" and to aid in future research. The research provides an overview of fintech as a crucial component of financial industry growth and a more rapid source of innovation, as well as the significant and advantageous effects of fintech and financial management on long-term corporate performance. According to studies, banks that used fintech innovation were able to significantly reduce costs while still offering flexible financial services to all players.

Gerard & Simon (2020) observed that the world is now different. Every boardroom now prioritizes addressing climate change. As digitalization and sustainability collide, new technologies are emerging that empower both enterprises and governments to have a long-lasting effect on the natural capital of the globe. Opportunities exist to genuinely improve our world as corporations advocate for more social and environmental responsibility and as digital technologies multiply economies of collective action and the appropriability of private value from public assets.

Legowo, Subanidja & Sorongan (2021) observed a description of the relationship between banks and fintech in the past, present, and future, with an emphasis on Indonesia as a case study. The usage of ATMs in Indonesia's traditional banks continues to be a kind of FinTech application. The current collaboration between the modern bank and the fintech sector is anticipated to broaden financial inclusion in banking. The future bank must give careful regard to the future presence of fintech and big tech enterprises. Research is required to fully understand the impact of FinTech on Indonesian banks and banking systems in order to inform future ideas.

Nezam & Nobanee (2021) observed that several facets and ideas of sustainability and green fintech (financial technology) were clarified. This study's findings revealed that green fintech has a promising future and beneficial effects on the financial markets and institutions. Additionally, it was found that the phrase "Green FinTech" is not yet commonly known, but that this has to change as soon as possible so that it may be used as a recognised solution to reach the highest level of sustainability across all financial businesses.

Lestari & Rahmanto (2021) observed that companies now conduct their operations on a technical basis as a result of the quick growth of technology. One of the cutting-edge businesses that offers financial goods and services online is financial technology. Automated financial services that are convenient, straightforward, and easy to use have evolved into the fundamental strategy for fintech and have become a crucial component for people to use fintech in their everyday lives. Additionally, fintech businesses innovate to provide engaging marketing activities, such as promo programs, discounts, coupons, and partnerships with several tenants, shops, transportation service providers, and others. The existence of financial technology, or fintech, has had an influence on the financial sector, particularly the banking business, and has attracted a lot of public attention.

Rajeswari & Vijai (2021) says that fintech is a new financial sector that uses technology and innovation to supply financial services via novel apps, workflows, products, or business models. Since India has an unmatched youth population that is continually expanding, fintech there is very attractive. Additionally, it's expected that smartphone penetration would increase, rising from 53% in 2014 to 64% by 2018. With 40% of the population having no bank affiliation and more than 80% of transactions taking place in cash, India's financial services sector remains mostly unexplored. This offers a chance for fintech start-ups to widely extend their wings in many industries. An outline of the Indian fintech industry was offered by this study as a conclusion.

Vergara & Agudo (2021) observed that the present worries about global warming and environmental difficulties, as well as the significance of corporate social responsibility (CSR) and environmental, social, and governance (ESG) elements, as well as their discussion in this article, have resulted in the birth of due to investors' readiness to consider both financial and non-financial factors when making investments, several types of behaviour (for example, greenwashing) and financial trends and instruments (such as socially responsible investing and the usage of sustainable Fintech projects) have emerged.

Gupta & Agrawal (2021) provides useful information to understand the breadth of FinTech from the viewpoint of the current economic crisis. The findings and results may be valuable and pertinent to many theories and disciplines. Academics have long studied financial technology, but the word "FinTech" is still fresh and fascinating. The study's main strategy is to answer questions effectively by using primary and secondary data in two different methods. The report identifies the key drivers of FinTech growth and the relationship between its adaptability and the economy. These decisions demonstrate that the FinTech concept will hold sway throughout

the COVID-19 pandemic's second wave. The outcomes also make clear the foundation on which conventional financial institutions must operate.

Ojha (2022) observed that, it is true that FinTech businesses have access to financial institutions' secure areas. The banking industry has existed for many years, if not centuries. FinTech still lacks the massive client base and tried-and-true rules seen in the banking sector. Banks should keep in mind that it was a weakness on their end that gave rise to their rivals; thus, they should be more receptive to customer feedback and technological advancements than their rivals. In areas where banks are constrained by resources and laws, fintech has made significant contributions to financial inclusion. After the financial crisis of 2008 and COVID-19, the situation underwent a paradigm shift. Being more digitally savvy and client-centred than trying to make money from traditional brick-and-mortar banking is a requirement of the times. If we perceive FinTech and banking as two distinct industries, we will be mistaken. For the banking industry to handle the complexity of financial technologies like blockchain, artificial intelligence, and machine learning, it must invest in research and development and increase its human resources. The banking sector must consider a new cooperation model with these businesses as it will be more profitable for both parties, as a bank's competition is not from fintech firms but from other banks that are utilising FinTech more effectively.

Mhlanga (2022) finds that Microfinance, insurance, and cash transfers, among other financial tools, were developed in response to the rising need for increased access to financial resources by individuals and enterprises. The number of development partners promoting the use of these technologies to solve concerns connected to climate change and catastrophe risks is also on the rise. Evaluating the effectiveness of different financial tools (financial inclusion) in solving climate-related concerns is necessary given the rise in risk reduction demands and obstacles. The study set out to address the following question: What is the role of financial technology in resolving the issues or hazards associated with climate change? It used secondary data examined using document analysis to achieve this. The study's findings, which were based on a content analysis of secondary sources of data, suggested that financial inclusion through FinTech could aid in enhancing households', individuals', and businesses' resilience to sudden climate events as well as to more gradual effects of different rainfall patterns, the rise in sea level, or saltier water intrusion.

Sharma , Singh , Gopalan & Rani (2022) mentioned that green banking has promoted economic advancement while simultaneously enhancing the environment. Up until recently, the bulk of traditional banks did not aggressively pursue business opportunities in environmentally friendly or sustainable sectors or businesses. Indian private sector banks trail behind their counterparts in affluent nations by a wide margin. Indian banks must recognise their ethical and ecological responsibilities if they wish to reach international markets. These strategies are now more widely used across a variety of financial service providers, including corporate finance organizations, insurance companies, and smaller alternatives as well as community banks.

Varma, Nijjer, Sood & Grimaand (2022) observed that over the past few decades, emerging technologies have altered how we communicate, shop, and conduct business. The way that people engage with their money, what they anticipate from banks, and how banks run have all been continually challenged by emerging technology. Consumer attitudes and interactions with money are changed, modern procedures are made simpler and more efficient, mistake rates are reduced, and communication is better. However, fintech disruption is a departure from the usual, leading to a substantial change in financial services and, consequently, risk. Studies are plentiful, which supports academics' expanding interest. We concentrated on individual, primary, empirical research on fintech, banking, and blockchain topics.

Yin, Jiao, Zhou, Xiong, EbukaIbeke, Marvellous & Biamba (2022) says that the influence of the fintech age on the stability of the Chinese banking industry and NPL is examined in this paper. According to the research of Arner , the data was split into the first and second waves of the fintech period for this purpose. According to the findings of this investigation, the second wave greatly improved NPLs and the stability of the Chinese banking industry. The development of the fintech revolution has improved the atmosphere for tracking and monitoring. It also helps traditional banking by allowing fintech lenders to offer simple credit. New investment possibilities can be created thanks to fintech innovation. Following this investigation, we suggest the following regulations.

Conclusion
Most of the significant literature on the subject was covered in the literature review. A complete synthesis of 21 articles and other secondary sources that were somewhat connected to the research topic chosen was done.
Finally, the researcher proposed the gap based on a survey of the literature. The following gaps are clearly identified by the researcher:

- The past research has focused on plenty of statistical and other details about the banking industry. Researchers also observed that detailed knowledge about fintech is essential.
- Work on Fintech in the banking sector has less happened in past research.
- Therefore there is a need to study the topic "Analysing Role of FinTech in Sustainable banking in Pune Region in India".

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A REVIEW ON EMPLOYEE ENGAGEMENT, EMPLOYEE SATISFACTION AND EMPLOYEE COMMITMENT WITH REFERENCE TO SUGAR INDUSTRIES IN MAHARASHTRA

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ABSTRACT
India's sugar industry is well-maintained and developing, with billions of consumers. India's sugar production ranks second worldwide. India's rural population depends on its 45 million sugar cane growers. Sugar is India's second largest agro-based business after textiles. Maharashtra Sugar Industry is a large-scale sugar producer. In recent years, sugar production has exploded. According to the current sugar production data, Maharashtra is doing better than other states. Employees play a major role in the development of the company. The study of employee engagement, employee satisfaction and employee commitment help the company to maintain standard and increase productivity by motivating the employees. An organization is successful as its employees are satisfied and committed towards their work. Present study aims to find out the impact of employee engagement, employee satisfaction and employee commitment at the sugar industries in Maharashtra.
Keywords: employee engagement, employee commitment and employee satisfaction

Introduction
Sugar is produced in vast quantities in India, which is why the country has the world's second-highest per capita consumption rate. Brazil holds a leading position as a global sugar producer and holds the top position in the sugar producing industry. The manufacturing of cotton materials has the first spot in importance in India, with the sweets trade coming in second. The sugar manufacturing unit is the second largest agro-business in rural areas of the Indian sugar industry, which is the nation's second largest producer of sugar. Sugar is a vital product in India, and the country has been producing a significant quantity of the sweetener since ancient times. An employee that is considered to have an engaged and positive attitude about their organization is said to be inclined. The job of employee engagement in the organization is one of the more difficult ones. The perceptions and levels of commitment of workers to their jobs are critical to the success of an organization.
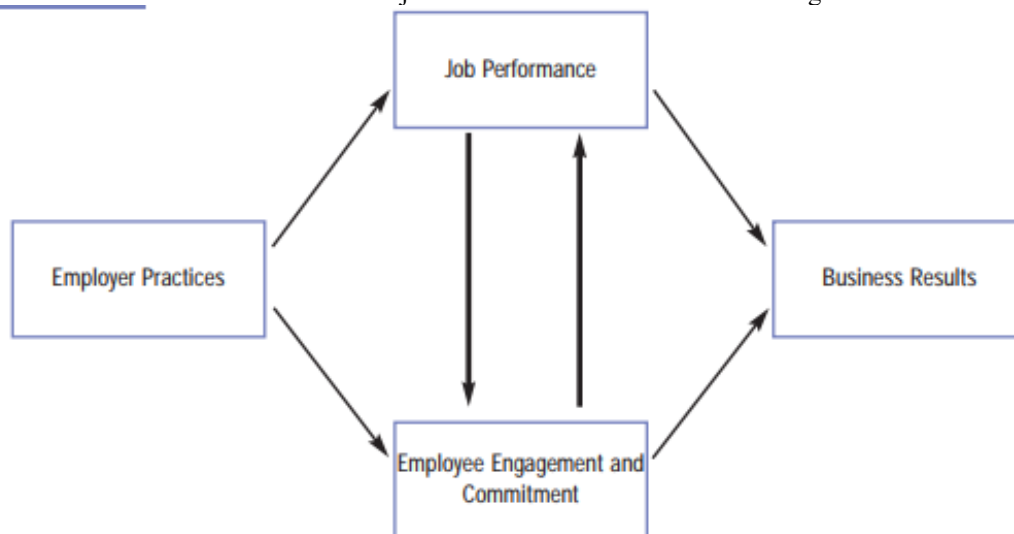
Fig 1: Employer Practices Ultimately Influence Business Results.

Companies with loyal, engaged staff can boost productivity and reduce attrition. Thus, firms of all sizes have invested heavily in policies and practices that promote employee engagement and dedication.

Research Methods
Objectives
To review literature based on employee engagement, employee satisfaction and employee commitment with reference to sugar industries in Maharashtra.

Research design
The study is descriptive in nature elaborating on the drivers of employee engagement on employee engagement, employee satisfaction and employee commitment.

Data Collection

For the present research secondary data was collected for literature review and theorization from various sources like books, journals, magazines, internet articles, Bank Website etc.

Discussion
Employee Engagement
Khan, the pioneer of the employee engagement concept, is credited with being the first person to establish the concept of multi-dimensional engagement back in the year 1990. Employees' physical, mental, and emotional expression while acting out their job responsibilities was referred to as "personal engagement," and it was characterized as the process by which workers "harness themselves to their work duties." The reference tried to explain this phenomenon by associating it with three psychological situations that were demonstrated in the performance of one's work role. These conditions were meaningfulness, safety, and availability. Meaningfulness is the feeling that self-investment is paying off. Safety means being able to conduct one's job without fear of repercussions (a sense of possessing the physical, emotional, and psychological resources needed at work). After that, Kahn's model was tested, confirming that engagement is favorably connected with psychological factors including meaningfulness, safety, and availability.

Drivers of Employee Engagement:
Most corporations share several key drivers of employee engagement. The components and relative strength of each driver may vary depending on the type of organisation, industry, and demographics of the country or region. These factors can influence the relative strength of each component.

Leadership:
It was shown that leadership is a key factor in an employee's engagement level. Indicators of successful leadership behavior and perceived support from supervisors were included in this component (PSS). Effective leaders engage employees through self-awareness, communication, transparency, courteous treatment, and ethical behavior.

Loyalty:
According to Schaufeli and Bakker (2004), employees who are more engaged with their work tend to have a lower rate of turnover and a higher level of commitment to the organization they work for. Employees who feel their contributions are valued by the company are more likely to remain dedicated to it. Several studies conducted in the past have supported the idea that increased levels of employee engagement are directly correlated to high levels of employee loyalty. The findings of the research conducted by Vazirani and Nitin (2005) demonstrated that the level of employee engagement is a critical factor in determining the success of a business because of the impact that it has on the loyalty of the workforce. Every company has the goal of being successful and gaining an advantage over their rivals; under these circumstances, companies aim to involve their skilled employees; as a result, the level of loyalty that employees feel toward their employers increases.

Employee Commitment
A comprehensive study in the Sugar Industry throughout India discusses various parameters like employee commitment, engagement and how they are impacted by the CSR activities conducted by the organization (Kovid, 2014). The researcher found that a higher adaptability towards CSR activities depicted a higher commitment of employers to welfare activities resulted in an improved employee commitment in these sugar mills. The findings were consistent throughout the country. Similar results were observed by (Serena., 2012) pointing towards greater employee commitment and engagement where the employees felt more cared for by the employee. Kwamanga & Achoch (2014) further found that having a variable pay component had a strong positive relationship with the employee commitment.

The feeling of being backed for learning was also found to be strongly linked to organizational commitment in the sugar factories. This made employees feel more linked to the company. Organizational commitment boosts employee engagement and connection.

Employee Satisfaction:

Another important parameter in the study of employee engagement is employee satisfaction. Employee satisfaction reflects how well an individual's interests and aspirations are met and how other employees perceive this. Different academics define employee satisfaction differently, but it's commonly seen as *"the work's scope and positive workplace feelings "* (Staples and Higgins, 1998) and can only be achieved if the parties view each other as consumers to fulfill. In recent years, organization and management behavioral research have emphasized that employee satisfaction is crucial both for employee and the organization. Finding strong and crucial relationships between absenteeism, employee turnover, and organizational loyalty in several research has led to a greater understanding of the relevance of employee satisfaction. Many researchers have questioned whether employee happiness and life satisfaction are related (Chacko, 1983; Tait., 1989; Howard and Frink, 1996). Internal communication improves employee happiness and productivity regardless of formality (Cummings, 1983). Organizations need formal communication to run smoothly. According to Perinic (2008), In daily contacts, informal communication is more reliable and beneficial than formal and official sources, which might mislead workers. Informal business communication involves sharing thoughts and feelings (Lesikar. 1993). When employees bring their issues to work, they may respond spontaneously, necessitating informal dialogue. Coworkers become friends after discovering they have similar beliefs, attitudes, and values (Kandlousiet., 2010). Dasgupta. (2012) stressed managers' role in creating a positive work environment by influencing employee behavior and helping them perform better. In this context, discussion means talking to coworkers and others (Yang, 2015). Communication channels were crucial to this author's research on Taiwanese hotel franchising businesses. A Spanish study found that procedural fairness modulates the association between internal communication and employee affective commitment (Gomes., 2011). Job satisfaction, job-related variables, and demographic variables are all strongly linked, as shown by several studies (Mesurado, 2021). Interpersonal relationships, the nature of the work, and feeling appreciated were identified as the three most important factors in determining job satisfaction (Thant and Chang, 2021). Job satisfaction was found to be positively influenced by demographic factors (Lange, 2021 and Duong, 2016). There is a favorable correlation between compensation and job satisfaction (Shah and Jumani, 2015 and Siahaan, 2017).

Employee Satisfaction in Sugar and Allied Industries

Rajakumari & Chitra (2019) look at the organizational climate and how it affects the employee satisfaction of the workers in these industries. Jegajothi (2015) examined the connection between organization environment and employee effectiveness. The study found that there is a positive association between organizational environment and employee performance, as well as between the organizational climate that stimulates and enhances the efficacy of the organization. The employees of sugar factories around Tamil Nadu were found to connect a lot of their engagement at work with the work environment in the factory

Conclusion

Each company requires a happy staff because happy workers perform better. Understanding employee job satisfaction, its associations, and effects on job commitment are the goals of the current study. The relationship between employee engagement and organizational performance is almost entirely favorable. The performance of organizations and organizational commitment are highly positively correlated. Employee satisfaction and engagement, they're different, but related. Job satisfaction is a component of employee engagement, but not the only one. Engagement depends on a worker's sentiments about their job. Engaged employees are more loyal to the organization than happy ones. Unengaged happy employees may want additional possibilities, growth, income, or a better match. Engagement and performance are virtually perfectly correlated. Commitment and performance are highly correlated.

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A STUDY EXCHANGE TRADITIONAL FUND (ETF) AS AN INVESTMENT AVENUE FOR PASSIVE WEALTH GROWTH IN INDIA WITH REFERENCE TO NIFTY50

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ABSTRACT
Mutual funds are emerging as an attractive investment option. MFs are successful especially in channelizing and mobilizing the savings of many retail investors into the investment in various equity and debt instruments. Mutual fund investment is considered as less risky than investing directly in stocks as experienced fund managers take delicate investment decisions and is therefore definitely a safer option for inexperienced risk averse investors.
An Exchange Traditional Fund (ETF) is defined as an instrument to gather money from prospective investors, with a promise that the money would be invested in a specific predefined manner and methodology
This paper studies performance of ETFs and presents an exchange traditional fund (ETF) as an investment avenue for passive wealth creation. Investment in ETFs picking up since last decade. Awareness level of investors is increasing
The analysis and interpretation from study presents that tracking error is higher for ETFs as compared to index funds. The active returns analysis by presenting two ETFs reveals that ETFs always fared better than their underlying index while the index funds sometimes underperformed
and sometimes outperformed the underlying index. Transaction fees and charges are higher in Index funds as compared to ETFs.
Suitable strategies and important aspects for sound investment decision making are also discussed in the paper.
Keywords – ETF, Investment Avenues, Passive Investment, Index Funds, SIP, Lump Sum investment

Introduction
An Exchange Traditional Fund (ETF) is defined as an instrument to gather money from prospective investors, with a promise that the money would be invested in a specific predefined manner and methodology.

Indians are traditionally fond of various savings. These savings were initially in the form of cash, which were after independence converted into bank savings under various bank savings plans. Savings have also been done through Life Insurance Policies, fixed deposits, National Saving Certificates etc. Gradually the saving trend of Indians has been changed to equity, real estate, corporate bond and bullion.

To understand the awareness about the ETF, a survey was conducted by Max New York Life and National Council of Applied Economic Research (NCAER), New Delhi. The outcome of the survey was that Indians prefer keeping more than 65% of their savings in the form of cash at homes, at banks or at post offices. 23% of Indians savings were in the form of investments physically, such as gold or real estate; and only 12% on financial instruments. However, it is to be noted that those who invested in equities have reaped better benefits than the above mentioned traditional savings, though its benefits are changing from time to time.

According to the estimate, the Assets under Management (AUM) of Indian Mutual Fund Industry as on 31st of March 2021 comes to Rs.29, 73,952 crores. The growth level of AUM of Indian MF Industry has gone from Rs.13.04 trillion as on 31st May 2015 to Rs.29.55 trillion as on 31st May 2021; i.e. more than double addition within 5 years period. The Mutual Fund Industry Assets Under Management has shown an unprecedented growth up to Rs.10 trillion (10 lakh crores), as per the figures noted in April 2014. In just a three year period, the AUM crossed double Rs.20 trillion (Rs.20 lakh crores) in July 2017. Assets under Management stood at Rs.29.55 trillion presently. It is the fastest growing section under the Finance services sector.

On 31st May 2020 the total number of mutual fund accounts have been recorded as 9.10 crores (91 million); while the equity folios Hybrid and Solution Oriented Schemes is reported as 8.03 crores (80.3million), and it is reported that the maximum investment source is retail segment.

Exchange Traded Funds (ETFs) are modern financial instruments and are considered as financial security based on index, commodity, or bonds.

Another peculiarity of ETF is that ETF trades like any common stock on any stock exchange. The daily liquidity of the ETF is observed to be on the higher side and fees are c lower in comparison with stock exchange. In conclusion we can understand that ETFs are very much beneficial.

Literature Review

Shukla & Malusare (2016) say that comparison of various mutual funds are done and found that analysis helps the investor in making investment decisions but not every investment is done with analysis alone will be helpful. Prasanna (2012) says that there are opportunities for improvement in the awareness of Exchange Traded Funds. Narend (2014) finds that exchange Traded Funds. ETF's scored over Index Funds as passive investment opportunities in financial markets. Evgeni (2012) "Price Momentum and Trading Volume" provides a vital link between momentum and value strategies.

Jayanthi, Malathy & Radhulya (2013) say that ETF gives better returns than in other modes of investments. There are more than 50% of individual investors who are unaware about the functioning and benefits of ETF's. Agarwal, Mirza (2017) An investor should analyze the market before investing. Investment analysis is highly important for the benefit of risk reduction and maximizes the gain. Stocks are unique investments because they allow us to take partial ownership in Kumar and Raj (2019) Gold as an investment avenue that always holds a special place in the hearts of Indians. Research paper discusses benefits of investing in Gold ETF's.

Ben-David, Franzoni, & Moussawi (2019) studied on interplay between investors' demand and provider incentives that have shaped the evolution of exchange traded funds. Investment in ETF's by investors of various countries were also analysed to find out preference of investors across various countries.

OBJECTIVES OF STUDY

1. To examine the performance of the Nifty ETFs in relation to the Nifty50 index.
2. To study the replication performance of the Nifty ETFs and rank the Index Funds based on Tracking Error.
3. To study the potential risk and reward of investing in Nifty ETFs.
4· To study how to use Lump-sum and SIP together as a combination to improve returns on investment.

Scope Of Study

To understand the present scenario with reference to ETF investment available in the market. Investors are also interested to know what is available in the market with the different degree of risk and returns. A discussion on risk and return is vital for any investment management. Hence the scope is explained as under:
1. These studies the performance of indices and ETFs from the period of their origin.
2. The study is specific and revolves around index and ETFs. Samples taken are on yearly basis.
3. All information collected is relevant till A.Y. 2021.

Research Methodology

Research methodology may be defined as scientific procedures used to understand, select, process and analyze on a given topic. The methodology enables readers to understand the validity and reliability. For our research, we have used a Quantitative Research methodology.

Research Design:

The research design gives answers to the questions on research problems such as what, how, when, why, money involved, time required, for the research study. In short, it gives clear answers/ directions on the above questions.

Sampling Unit:

To this study, samples were selected from two Exchange Traded Funds.

The research problem presented was solved by systematic analysis of data. Examination of excess return, tracking errors, expense ratio was done in order to perform data analysis and subsequent interpretation.

Sample Size
Samples were selected from two Exchange Traded Funds; such as SBI Nifty 50 ETF and Nippon India Nifty 50 Bees ETF

The research problem presented was solved by systematic analysis of data. Examination of excess return, tracking errors, expense ratio was done to perform data analysis and subsequent interpretation.

Data Collection And Analysis
Secondary data was used for the research study. Secondary data is defined as data, which is collected by someone other than the primary user. We have used published documents, articles published, reports of Association of Mutual Fund, NSE website etc.

Firstly, the study of the Nifty index was done. For that, data of nifty in the following are analyzed for a period of 10 years and in a way to understand the historical performance of the index over the long period of time. That gave us a benchmark to analyze and make certain assumptions and interpretations. Since its inception Nifty 50 index has delivered an annualized return of 12.2% beating all the other asset classes over the time in the passive investment class.

Summary of the Nifty performance for the year December 1995 is shown below:

To analyze this from another perspective, kindly go through the table below.

It gives you the current value of Rs 1 lac invested in *Nifty 50* every year since 1995(since inception of Nifty index):

Rupees one lakh invested in Nifty 50 index fund could have given Rs. 22, 74,962.00 as on December 2021; giving the annualized return of 13.12%.

Script	Highest	Lowest	Change (Since Inception)
Nifty	18604.45	775.43	2274.96%

Table1 : NIFTY50 returns

Comparative study of two Nifty ETF's was carried out. Data is represented as follows

NAME	TRACKING ERROR	EXPENSE RATIO	RETURNS	Benchmark
SBI Nifty 50 ETF	0.27	0.07	13.52%	NIFTY 50 – TRI
Nippon India Nifty 50 Bees ETF	0.18	0.05	9.86%	NIFTY 50 – TRI

Table 2: Comparative study

SBI Nifty 50 ETF

CAGR	5 Year	3 Year	1 Year

CAGR	5 Year	3 Year	1 Year
FUND RETURNS	11.66	13.72	1.61
IMPLIED INVESTOR RETURNS	13.52	16.97	7.46

Table 3 : SBI Nifty 50 ETF CAGR

Nippon India Nifty 50 Bees ETF

CAGR	5 Year	3 Year	1 Year
FUND RETURNS	8.98	14.93	1.64
IMPLIED INVESTOR RETURNS	9.86	17.31	8.73

Table 4 : Nippon India Nifty 50 Bees ETF CAGR

Comparison of Risk-Adjusted Returns of ETFs and Index funds

Index funds tracking Nifty50	Alpha (%)	Beta	R2
SBI Nifty 50 ETF	-0.19%	0.97	0.99
Nippon India Nifty 50 Bees ETF	-0.53%	0.93	0.94

Table5: Comparison of Risk-Adjusted Returns

Interpretation

After seeing historical data and performance of the index for more than two decades the return earned are fabulous and are much desired among the common investor who does not understand the stock market functions. Over the long term one can invest in lump sum and small amount through sip and can make a good number of returns.

For analyzing the performance from the beginning, the research study took two Exchange Traded Funds. The objective of any investment schemes is to obtain return on investment.

SBI Nifty ETF is sponsored by the State Bank of India and managed by SBI Mutual Fund. On the other hand, Nippon Nifty Bees ETF is sponsored by Nippon India Exchange Traded Fund Limited and managed by Nippon Life India Asset Management.

Both ETFs are passively managed and aim to provide exposure to the Nifty 50 Index, but there may be minor differences in their portfolio composition, expense ratios, and other fund characteristics. It is recommended to compare the ETFs' holdings, expense ratios, and performance history before making an investment decision.

Tracking Error And Expense Ratio

The ratio of expense shows how much it costs to be in and out of the theme. It affects the actual returns.

SBI Nifty ETF had an expense ratio of 0.10% and Nippon Nifty Bees ETF had an expense ratio of 0.11%, which suggests that both ETFs have similar expense ratios. However, the exact tracking error of each ETF may differ and it's important to check the latest information. Keep in mind that expense ratios and tracking error can change over time, so it's important to regularly review these metrics when comparing ETFs.

In general, when comparing ETFs, it's important to consider both the expense ratio and the tracking error, along with other factors such as the portfolio holdings, liquidity, and performance history.

Findings And Observations:

➢ Annualized return from the inception is 13.52% by SBI Nifty Exchange traded funds which is far better in comparison to any other passive investment option.

➢ Finding the fund with low tracking error and expense ratio is important as it improves the return on capital employed. Although return on investment also needs to be looked into as an important

criterion.

➢ Combination of lump sum and SIP together gives better return than simple SIP.
➢ Maximum investors are now getting aware about Exchange Traded Fund investment options. Investors do not invest in a single avenue. They prefer different avenues.

➢ Maximum investors prefer to invest in bank FD but as return rates are getting lower and lower they are now moving towards stock markets through ETFs. The basic objective of investors is to invest money where they are convinced of a proper return on investment.

➢ While doing investment factors such as return on investment, benefit of tax, and appreciation of capital are to be considered. From the research it was found out that behavioral factors are also influential while making investment decisions.

Suggestions:
Following are the recommendations of the study:

➢ Investors who want to create a corpus for a particular purpose in the future i.e. Minimum of 20+ years should allocate a good amount of their investment in the index fund.

➢ Investors for getting proper return on investment may invest largely in ETFs as it can give them all the required facilities and gain from it.

➢ In fact the investment pattern of investors depends upon their needs from time to time; it is recommended to investors that long term investment is better than short time span.

➢ Those investors who want to create real wealth from ETFs and want financial freedom should go for diversification by allocating funds for lump sum as well as SIP strategy to have a great return on investment.

➢ Investors should consider going for a new way to invest in this new era with direct investing through direct plan which have a low expense ratio.

Reasons to consider for investing in ETFs with reference to above mentioned mutual funds:
Diversification: ETFs provide exposure to a broad range of stocks, bonds, commodities, or other assets, which can help to diversify an investment portfolio and reduce risk. Both ETF's track nifty which consist of 50 stocks from 20 diversified sectors.

Low Costs: ETFs typically have lower expenses than actively managed mutual funds, which can result in higher returns for investors over the long term. Cost to invest in above ETF's are significantly less as compared to other mutual funds.

Liquidity: ETFs are highly liquid and can be easily bought and sold on stock exchanges, making it easy for investors to buy or sell their holdings as market conditions change. Entry and Exit can be freely initiated in both ETF's.

Potential for Higher Returns: ETFs can provide exposure to asset classes that have historically delivered higher returns, such as emerging markets or real estate. As it is being proved via research that the direction of the index in the long term is usually in an upward direction. Even unluckiest wins in long term investment.

Investment Strategy based on Findings
To maximize the returns only passive SIP will not work. So, to create extra alpha from this investment we can follow a simple strategy of SIPs and Lump sum.

Strategy is simple whenever Underline Index comes below its 200 days moving average and then start to cross the 200 days moving average invest the lump sum amount. By this process the average of your NAV will come drastically down resulting in better returns. Exchange traded funds provide a better and safe platform of wealth creation as one can benefit from index management strategies by experts.

Conclusion:

In this study, a comparative study was performed between two Exchange Traded Funds SBI Nifty 50 ETF & Nippon India Nifty 50 Bees ETF to evaluate the performance.

Out of many Exchanges Traded Funds Nifty 50 ETFs selected to come out with proper benefits.

After comprehensive study it was found that the tracking errors existed in ETFs and Expense Ratio varied for different ETFs but not very significantly. As a result of which it must not be the primary criteria for decision making in investment.

The main portion of financial savings goes into pension funds and life insurance. Currently, Stock Market, Mutual funds and Exchange traded funds have become incredibly popular options for a wide variety of investors. One of the primary reasons can be due to "*Mutual fund sahihai campaign*".

The automatic diversification Exchange traded fund offer, as well as the advantages of professional management, liquidity and customizability.

After comparison of two ETF's it is concluded that there's no significant difference in the performance of the ETF as compared to actively managed mutual funds.

Finally it is concluded that ETFs are better than index funds and other type of passive investment financial instruments and it is projected to grow at a rapid pace based on findings of the research.

Nifty ETFs can be a good investment option for investors looking for a low-cost and convenient way to gain exposure to the Indian stock market.

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A STUDY OF CORPORATE COMMUNICATION PRACTICES IMPLEMENTED IN PERIOD OF COVID-19 WITH SPECIAL REFERENCE TO IT COMPANIES

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ABSTRACT
The Covid-19 epidemic was unlike anything previous calamity in recent times, affecting practically every organisation on the earth. It is imperative for the organisation to prioritise internal relations at this time. Any business's success is dependent on its ability to communicate effectively. A motivated workforce requires effective communication. Employees that are engaged are significantly more likely to display the dedication and commitment essential for comprising a total in any company. Employee communication is important because it contributes to higher levels of employee engagement, which is associated with better organisational growth. Suddenly, Covid-19 altered the way corporations connect with their employees. Many modifications were forced upon companies, and many more are currently being implemented. The focus of this research paper is to investigate the corporate communication practices implemented by IT companies to ensure smooth internal communication throughout this challenging period.
Keywords: Covid-19, Corporate Communication, Information Technology (IT)

Introduction

Organizations all across the world were plunged into such turmoil during the COVID-19 crisis that many weren't sure the organization would survive. Many organisations around the world have faced issues because of the coronavirus outbreak. If businesses and organisations are to overcome the problems faced by this outbreak, they must have sophisticated communication channels that underscore the relevance of following the health protocols established by the Centers for the World Health Organization and Disease Control. (Gandica, Talwar, Thungon, Pyrtuh & Kumah, 2021). Internal and external communications are part of the company's corporate communications strategy to promote and prioritise employee wellness during the COVID-19 epidemic. The COVID-19 handling team was formed to coordinate with all parties by using various communication mediums based on the employees' needs, such as WhatsApp, email, announcement boards, and independent screening cards, as well as engaging with external parties by phone, email, and WhatsApp (Mardiana, Annisarizki & Putri, 2020).

Employees are an organization's most significant stakeholder and serve as community ambassadors. Communication outside the organisation will be more challenging if they aren't informed and don't grasp what's going on. Several organisations are using a variety of ways to interact with their customers and staff during the COVID-19 epidemic. For video conferencing, companies can use email, social media, or other third-party services. Texts, emails, phone calls, teleconferencing, voicemails, and handwritten notes are examples of verbal, written, and electronic communication. Because most life sciences organisations are unable to make face-to-face contact with their employees, sending an email, a phone call, or a text message may be the next best alternative. Because these interactions are permanent, recorded, and searchable, it's critical that they follow a company's policies, processes, and training because the outcomes may differ from typical face-to-face meetings. Because of the constraints imposed by the virus in terms of health risks, the informal mode of communication is a more appropriate mode of communication and the primary means by which organisation members can obtain the intended material and keep themselves informed (Marjan , Bojadjiev and Vaneva, 2021). The goal of this study is to learn about the corporate communication practices used by IT companies during pandemics.

Literature Review

Employee involvement has grown in significance in the current epidemiological environment as a result of COVID19. In this scenario of lockout, seizing the leading spot even without consent of subordinates would be an impossible standard. Throughout this difficult time, organisations realize how critically engaged and motivated people are important for their success. Therefore, organisations must really be prepared to preserve their employees' contentment and engagement using employee engagement in the scenario of a crisis (Chanana and Sangeeta, 2020). The ambiguity surrounding the current pandemic's repercussions and the potential for more ripples of contamination should spur government officials to create emergency measures in case of further

breakouts (Boiral, Brotherton, Rivaud, Guillaumie, 2021)   For management, this has a number of repercussions. On the one hand, businesses will be able to use our research to see what communication tactics other similar businesses have employed in the context of COVID-19 and even if they are like their own (Mata, Pedro & Buil, Tamar, Campillo, María, 2021). A strong communications plan, according to guidelines, should incorporate an awareness of data (Hyland-Wood, Gardner & Leask, 2021).

Research Methodology
Research design is the specification or development of methods and procedures for collecting the required data to structure or solve problems. It's a set of small decisions that, when combined, form a precise master plan for the study's execution. This study is descriptive in nature, and it tries to investigate how IT companies in and around Pune communicate during a pandemic.

1. To recognise various aspects of the study issue, a comprehensive literature review is carried out.

2. Select the data of IT companies in and around Pune.

Statement of Problem
The Pandemic breakout compounded the difficulty of communicating with people at work. As far as achieving a business goal is concerned, corporate communication is very important. It's particularly helpful in determining IT organisations' communication practises because they're dealing with work from home in this critical period.

Objectives of the study:
The major objective of this research is to gain more knowledge about the communication strategies used by Pune-based IT companies.

Hypotheses
H1: There is a significant difference in communication methods used before and after Covid in IT companies in and around Pune.

Scope
The study's scope is confined to corporate communication methods employed in and around Pune City's IT companies.

Data Collection
Employee information is gathered using a structured questionnaire by using snowball sampling method. This questionnaire was distributed to 50 employees from various IT companies, and 20 people have responded. This research is based on the responses of 20 employees from various IT companies in and around Pune. The data is of a primary nature. The secondary data for this study was gathered from a variety of materials, including study reports, books and articles, and research papers published in online journals.

Data Analysis & Interpretation

Business Updates	No. of Respondents	
	Before	**After**
Always	10	10
Sometimes	3	4
Once in a While	3	2
Rarely	1	1
Never	3	3
Total	**20**	**20**

Table 1 Organizations Provide Business Updates Before and During COVID
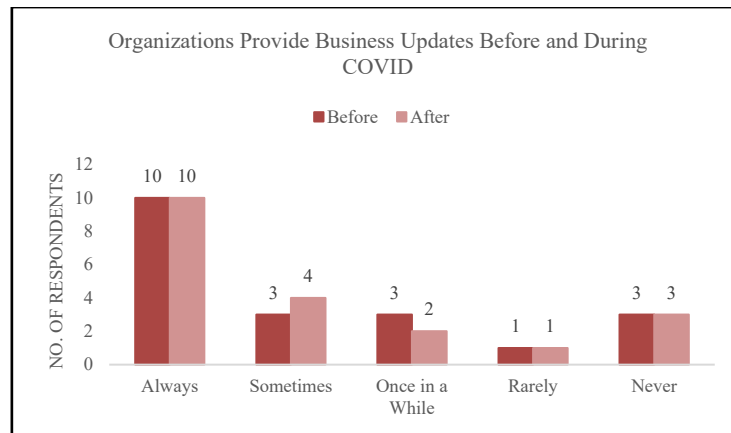
Fig. 1: Organizations Provide Business Updates Before and During COVID

There is no significant variation in the business updates provided by the organisation before and after COVID, as shown in Table. 1 and Fig. 1. Both periods are remarkably similar.

Comparison of employee practices implemented by IT companies before and during pandemic.

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Transparency regarding the organization's principles, policies, and procedures (before)	4.75	20	.550	.123
	Transparency regarding the organization's principles, policies, and procedures (during)	4.65	20	.587	.131
Pair 2	Performance Appraisal (before)	4.65	20	.671	.150
	Performance Appraisal (during)	4.60	20	.681	.152
Pair 3	Communication (before)	4.75	20	.550	.123
	Communication (during)	4.70	20	.571	.128
Pair 4	Healthy and Secured Environment (before)	4.70	20	.571	.128
	Healthy and Secured Environment (during)	4.75	20	.550	.123

Table 2. Paired Samples Statistics

Fig. 2: Comparison of employee practices implemented by IT companies before and during pandemic.

		Paired Differences							
					95% Confidence Interval of the Difference				Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	Lower	Upper	t	df	
Pair 1	Transparency regarding the organization's principles, policies, and procedures (before) Transparency regarding the organization's principles, policies, and procedures (during)	.100	.308	.069	-.044	.244	1.453	19	.163
Pair 2	Performance Appraisal (before) Performance Appraisal (during)	.050	.394	.088	-.134	.234	.567	19	.577
Pair 3	Communication (before) Communication (during)	.050	.224	.050	-.055	.155	1.000	19	.330
Pair 4	Healthy and Secured Environment (before) Healthy and Secured Environment (during)	-.050	.224	.050	-.155	.055	-1.000	19	.330

Table 3. Paired Samples Test

Table 2, 3 and Fig. 2 illustrate the results of the paired samples t-test, which reveal that the IT companies' procedures before and during the pandemic period did not differ significantly. In the before pandemic the mean scores ranges from 4.65 to 4.75 whereas the during mean score ranges from 4.6 to 4.75. The p value is more than .05 ($p < 0.05$) related to four features of the employee practices which shows that there is no difference in before and during employee practices which is implemented by the IT organizations.

H0: There is no significant difference in communication methods used before and after Covid in IT companies in and around Pune.

H1: There is a significant difference in communication methods used before and after Covid in IT companies in and around Pune.

Comparison of means of communication is preferred by IT companies before and during pandemic.

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Face to Face (before)	3.35	20	1.599	.357
	Face to Face (during)	2.80	20	1.508	.337
Pair 2	Phone Call (before)	3.70	20	1.174	.263
	Phone Call (during)	3.90	20	1.373	.307
Pair 3	Email (before)	3.80	20	1.361	.304
	Email (during)	4.15	20	1.309	.293
Pair 4	SMS/Messengers (before)	3.55	20	1.356	.303
	SMS/Messengers (after)	3.80	20	1.576	.352
Pair 5	Video Call (before)	3.35	20	1.268	.284
	Video Call (after)	3.80	20	1.196	.268
Pair 6	Zoom/Google/WebEx Meetings (before)	3.50	20	1.192	.267
	Zoom/Google/WebEx Meetings (during)	3.90	20	1.252	.280

Pair 7	Intranet (before)	3.35	20	1.565	.350
	Intranet (during)	3.60	20	1.392	.311
Pair 8	Social Media (before)	3.50	20	1.357	.303
	Social Media (during)	3.55	20	1.432	.320
Pair 9	Other (before)	2.85	20	1.461	.327
	Other (during)	2.90	20	1.683	.376

Table 4. Paired Samples Statistics

Comparison of mean of communication is preferred by IT companies before and during pandemic.

	Face to Face	Phone Call	Email	SMS/Messengers	Video Call	Zoom/Google/WebEx Meetings	Intranet	Social Media	Other
before	3,35	3,7	3,8	3,55	3,35	3,5	3,35	3,5	2,85
after	2,8	3,9	4,15	3,8	3,8	3,9	3,6	3,55	2,9

Fig. 3: Comparison of means of communication is preferred by IT companies before and during pandemic.

		Paired Differences							
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference		t	df	Sig. (2-tailed)
					Lower	Upper			
Pair 1	Face to Face (before) Face to Face (during)	.550	1.605	.359	-.201	1.301	1.532	19	.142
Pair 2	Phone Call (before) Phone Call (during)	-.200	.696	.156	-.526	.126	-1.285	19	.214
Pair 3	Email (before) Email (during)	-.350	.988	.221	-.812	.112	-1.584	19	.130
Pair 4	SMS/Messengers (before) SMS/Messengers (during)	-.250	.639	.143	-.549	.049	-1.751	19	.096
Pair 5	Video Call (before) Video Call (during)	-.450	1.146	.256	-.986	.086	-1.756	19	.095
Pair 6	Zoom/Google/WebEx Meetings (before) Zoom/Google/WebEx Meetings (during)	-.400	.821	.184	-.784	-.016	-2.179	19	.042
Pair 7	Intranet (before) Intranet (during)	-.250	.639	.143	-.549	.049	-1.751	19	.096

| Pair 8 | Social Media (before) Social Media (during) | -.050 | .999 | .223 | -.517 | .417 | -.224 | 19 | .825 |
| Pair 9 | Other (before) Other (during) | -.050 | 1.605 | .359 | -.801 | .701 | -.139 | 19 | .891 |

Table 5. Paired Samples Test

The result of the paired samples t-test is presented in Table 4, 5 and Fig. 3 which shows that the means of communication is preferred by IT companies before and during pandemic. The mean score ranges from 2.8 to 4.15, whereas the before mean score ranges from 2.85 to 3.8. The p value is more than .05 (p<0.05) related to all means of communication is preferred by IT companies before and during pandemic except Zoom/Google/WebEx Meetings shows that there is no difference in before and during use of communication. However, Zoom/Google/WebEx has a p value of less than.05 (p0.05), indicating that there is a difference between before and during.

In the situation of a pandemic, nearly all of the respondents stated that no other means of communication were used. According to them, all of the communication methods indicated in the survey are adequate for communicating with employees.

Conclusion

The organisation may converse more efficiently and effectively both during an outbreak and in everyday situations by empowering employees to express, maintaining honest conversations with workers, and adopting effective communication strategies into operation. Employee communication methods, styles, and traits have altered as a upshot of the epidemic, and will endure in the foreseeable. The means of communication used in the period of covid-19 and before it is relatively similar, according to the study. The use of these tools has risen by a certain amount.

Findings & Discussions

According to the analysis the business updates supplied by the organisation before and after COVID are surprisingly similar. Employee practices implemented by IT organisations before and during the outbreak have likewise been seen to make no effect. There were no differences in how respondents communicated before and during the pandemic. However, the p value for Zoom/Google/WebEx Meetings is less than.05 (p0.05), showing that there is a difference between during use.

Scope of Further Research

The investigation of primary data revealed that there is a need for a more in-depth study of the tools utilised by IT companies during the period of covid. As a result, future studies with greater sample sizes will make significant contributions to the discipline. It is also necessary to investigate the influence of these tools on HR communication strategies as well as employee communication.

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A STUDY OF GOVERNMENT INGENUITIES: A CASE STUDY OF TOURISM AND HOSPITALITY INDUSTRY IN MAHARASHTRA POST COVID-19

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ABSTRACT
India is a developing country which has a rich heritage of tourism enabled resources that can lead it to be the best tourism destination worldwide. Tourism has always been one of the prime contributors to the nation's GDP, employment generator, reason for infrastructure development and a mode of international integrity. Tourism can be a reliable source of sustainable development of a country. The role of the government of any country is very important to have a positive and sustainable growth of any sector. The government support in terms of policies, schemes, financial assistance, and expertise play a crucial part in the delivery of products and services to the consumers. The Government of India and State Government of Maharashtra have understood the importance of tourism and are striving to support, promote and motivate the industry. It has also recognized new avenues of tourism format that will lure the tourist and attract them. The researcher intends to highlight the various schemes and marketing efforts undertaken or launched by the government for the betterment of tourism in our country.
Keywords: Government Initiatives, Tourism and hospitality industry, Maharashtra, post COVID19.

Introduction

An epidemic was first identified in China in Wuhan province in late 2019. It was recognised as a virus named SARS-CoV-2 which caused a severe respiratory ailment. Further it was professed to a Public Health Crisis of Global concern on 30th Jan. 2020. It went to become more and more severe resulting in a status pandemic by the World Health Organization on 11th March 2020. India registered its first case of COVID-19 in the month of January in Kerala of a person who had an international travel history to a country which was already infected with COVID-19. The number of cases of COVID-19 started increasing with a pace of nuclear reaction which compelled the Government of India to declare a nationwide emergency lockdown. Except vital services like hospitals, pharmaceuticals, police etc. all the industries were brought to a standstill. The citizens were forced to remain in their house and were discouraged to step out without very important reasons. The borders of the districts, states and the countries were sealed. International flights were suspended. Tourism and Hospitality industry was not an excuse. The hotels were asked to close totally. The tourist inflow was stopped totally at the tourist destinations. As far as possible all the industries were mandated to start with "work from home" mode. Eventually the restaurants were allowed to start with take-away as an emergency necessity service for survival of fellow citizens. The whole world was in a terrible sense of powerlessness due to the unseen and unknown enemy spasm. Gradually the Hotels were urged to perform as quarantine centres for the travellers as a precautionary measure.

The crucial component of socializing and travel was mandatorily constrained, this acted as a major impasse to the manoeuvres and up growth of the tourism, hospitality industry, travel industry and travel agencies.

The COVID-19 crisis was applicable worldwide; it economically spilled over almost all the sectors like automobile, construction, manufacturing, trade and commerce, capital market etc. The most adversely affected was the service industry like tourism, hospitality, and travels. They were at the threat of sustainability; their performance was at rock bottom with the burden of overhead expenses and liabilities (Bhat, 2020). The daily wages of workers and the local community who were dependent on the above industries were at jeopardy. They were totally panicked and frustrated (Gautam, 2021).

Tourism and the hospitality industry is a service oriented powerful vehicle that plays a pivotal role in the economic growth and creation of jobs for the nation. It directly or indirectly creates regional and infrastructural development, supporting numerous sub-industries. It influences refurbishment of local art and culture. It is the brand ambassador of Global integrity. India has a great geographical diversity to offer along with historical forts, monuments and palaces, attractive beaches, hill stations, 37 UNESCO World Heritage sites, 80 national parks, 441 sanctuaries and 10 bio geographical zones.

The earnings of India's Tourism and hospitality industry are forecasted to reach 50.9 billion USD by 2028 in comparison to 28.9 billion USD in 2018. The travel industry in India is estimated to reach 125 billion USD by 2027 from 75 billion USD in 2020. India's hotel industry in various formats viz. domestic, outbound, and inbound made an approximate 32 billion USD, which is expected to grow to 52 billion USD. The International tourist arrival is estimated to go up to 30.5 million in 2028. This all is driven through surging demand for India tourism, digital infrastructure in tourism and sustained efforts of all the stakeholders.

COVID-19 was an unprecedented and unpredicted event for the policy makers and the government authorities. The whole mankind was in a panic mode with no proven treatment, medications, or vaccination. The rapid increase in the number of cases and shortage in medical infrastructure to treat them with an increase in death cases strict lockdown seemed to be the only way to control the situation (Vijay 2021). The tourism and hospitality industry were very bad. Its contribution to the Global GDP dropped sharply from 10.4% in the year 2019 to 5.5% in the year 2020. The Travel and Tourism GDP contribution of India dropped down by 36.33%. Domestic tourist spending was reduced by 30.71% while the Foreign Tourists Spending was dropped by 61.03%. The tourism revenue of the nation fell from 2833 million USD in the month of Jan 2020 to 9 million USD in the month of April 2020. The Foreign Exchange Earning experienced a deficit by 76.8%. The revenue per available room of the hospitality industry showed a shortfall with 76% in economy hotels, 66% in mid-scale hotels, 63% in upscale hotels and 67% in luxury hotels. The food industry in India registered a substantial drop in estimated revenue by 40% that is just 2 lacs crores instead of 4.96 lacs crores.

Chaturvedi (2022) in the article in Economic times mentioned that Shri G Kishan Reddy acknowledged that there was a loss of 14.5 million jobs in the hospitality and tourism industry during the first wave. Furthermore, 5.2 million lost their jobs during the second wave and 5.2 million in the third wave.

The situation started improving with the drop in daily positive cases of COVID-19; citizens were educated about the precautions to be followed to prevent the spread of the pandemic. The defensive vaccination was developed and the Government successfully started vaccinating the people around the country. But the destruction which was caused by the first and second waves to the tourism and hospitality industry was so massive that the recovery seemed to be out of reach or very difficult and slow. It was only the government intervention and support that would serve as a salvation to the industry.

Review of Literature

Senthilkumaran (June 2021) stated that the government of any country through its policies, persistent efforts and supportive initiatives can build a great flourishing ecosystem for the tourism and hospitality industry. It should understand and act on its role as a mentor, promoter, expediter, instructor and financial consultancy (Qin 2011). The government assists the planners of tourism, that is, tour operators and operators of tourism like travel agents, OTA etc. to develop a country as a Brand. The government plays a vital role in developing tourism infrastructure, advertising the destinations, skill in human resource development and research work. The government influences the growth rate of the tourism and hospitality industry in a substantial way. They are responsible in creating an environment favourable for investment by domestic or foreign investors for hotels and restaurants by luring them with incentives and tax benefits. The government also provides accessibility through various modes like roadways, railways, airlines, water transport etc. It also provides telecommunication and digital infrastructure for the hospitality industry and the tourists (Uysal & Crompton, 1984).

Azizbek (2021) mentioned that the Tourism and hospitality sector is highly sensitive and is extremely vulnerable to external factors like natural disasters, political instability, social and economic crisis, terrorism, pandemics or epidemic etc. It is a worst hit to the countries that are totally dependent on tourism. Government support especially during the crisis like Covid-19 pandemic becomes more crucial and essential. It 's efforts to retard the spread of the contagion like awareness and encouragement for maintaining safe distance, hand washing and wearing a mask was incredible (Justin, 2020). The government needs to be in communication with the tourism and hospitality industry, provide subsidies, reduction of taxes, incentives that will help the industry to revive. They also need to focus on the efficient healthcare facilities, strict inspection, and vigilance. The protection and trust of the tourist should be of paramount importance.

The government incentive packages, and interference will act impressively for the reviving productivity of the industry. The government can also consider a public-private collaborative approach towards boosting the tourism and hospitality industry. The government measures have a significant contribution towards the tourism and hospitality industry's pursuit for the suppleness towards revival from the trauma of the Covid-19 pandemic (Sharma 2021)

Expectations of the hospitality industry from the Government:

Hoteliers India Magazine in its article that represents the views of expectation of the hoteliers to the government. The Hoteliers Association of India put forth some rational relief support measures that will benefit the hospitality industry to endure and resuscitate.

1. Postponement of all statutory accountabilities including EMI for at least a year at central, state and local government level.
2. Government should provide a subsidy contribution of half the salaries of the employees for a quarter year.
3. Government should suspend property taxes, excise fees, rentals, lease, and license for the period right from declaration of lockdown till the end of Covid-19.
4. Permit the hospitality industry to use the GST collection as working capital for half a year.
5. Utility costs like electricity, water bills etc. should be charged on the basis of actual usage rather than the load.

The FAITH (Federation of Associations in India Tourism & Hospitality Industry) requested the Government of India with following measures to boost tourism:

1. A yearly moratorium on the EMIs on the loans and working capital from banking and non-banking financial institutions.
2. Working capital limit should be raised to double and on non-collateral terms and interest free.
3. As a precaution to avoid bankruptcy, the Government should permit a year of postponement on Advance Tax, Employees Provident funds, GST, custom duty, excise fees, security deposits, water and power bills and license renewal.
4. Postponement in increase of premium for various types of insurance like standard fire or special perils for loss, etc.
5. Deferment of policy approved in Finance Bill 2020 about collection of taxes at the source on travelling, to be levied from 1ˢᵗ of April, 2020.
6. Exemption up to 200% on the expenditure to national corporations while hosting exhibitions, inducement trips and conferences.

Other reputed hoteliers expected that the Government should invest in infrastructure to increase smooth connectivity till the last mile. They should not only link with popular destinations but also new unexplored destinations also. This will definitely boost domestic tourism and kick start the tourism economy. The GST rates to the hospitality industry should be reduced for a couple of years. The GST applied to large hotels should be reduced to 5% to 6% from 12% to 18%. Only the taxes should be levied on sale or purchase of the liquor while the fees levied should be completely waived off. The government should consider the implementation of the Troubled Assets Relief Program.

Efforts of the Central Government to boost tourism post Covid-19:

The Minister of Tourism, Reddy G. K. in his answer to a question in RajyaSabha on 16ᵗʰ December, 2021,briefly explained about the efforts of the Government to promote tourism during the post COVID-19 era. He mentioned that the Government understands its responsibility towards this most rewarding service sector and accordingly has introduced various economic stimuli to support the sector.

The Government has launched "DekhoApnaDesh" and promoted it through social media and tourism ministry websites. It has also conducted various promotional activities like online quizzes and webinars to create awareness amongst the citizens about different destinations across the nation, especially the unknown or less popular destinations. This intentionally focused on encouraging domestic tourism in the country.

Industry	Number of Guarantees issued	Amount of Guarantees issued (Crores)
Travel & Tourism	2372	1371.62
Hospitality Industry	3160	5430.96
Hotel, Restaurants and Tourism	218	3403.90
Tourism, Hotels and Restaurant	96219	3559.43
Total	102329	13765.92

Table 1: ECLGS support under 3.0, 2.0 and 1.0 schemes wise data as on 30.09.2021.

The Government has also declared several economic measures and relief measures to support the tourism and hospitality industry to revive from the impact of pandemic which are as follows:

- Under Atmanirbhar Bharat Scheme the government has initiated a provision for Rs.

- 3, 00,000crore to provide loans to MSMEs which will be collateral free and automatic.

- Government eased the organisations having lesser than 100 employees and 90% of their employees drawing less than Rs.15000 by waiving out Employees Provident Fund contribution for three months.

- It also reduced the EPF contribution of employee and employer by 2% for three months.

- Postponement in Tax Deduction at Source was done till October 2020

- The filing of returns was postponed for 3 months with our penalty of interest for organisations up to Rs. 5 crores while the rest were levied with reduced penal interest of 9% only.

- With an intention of business revival and sustainability the government gave relief from regulatory compliances for income tax, GST and Company Act 2013 for a variable period.

- The suspension on term loan was extended till 31st of December 2020 by the Reserve Bank of India.

- An Emergency Credit Line Guarantee Scheme was launched which covered hospitality enterprises, sports, travel and tourism. It helped them to meet with their operational liabilities and to restart their business.

- Financial support in terms of loans was extended to recognised Tourist Guides (up to 1 lacs) and recognised Travel & Tourism Stakeholder (up to 10 lacs) under Loan Guarantee Scheme for Covid affected Tourism Service Sector. This was provided with no processing fees, pre-closure/pre-payment charges and no –collateral.

- Issuance of 5 Lacs Tourist Visa free of charge after the opening of Visa issuance till 31st March 2022.

- On 26th April 2021, the Harmonized Master list for Infrastructure was made with the addition of Exhibition cum Convention Centre so that Tourism and Hospitality industry will be benefitted.

- On 28th June 2021, the Government with an intention to boost varied sectors of the economy declared an incentive package with 17 measures focusing on economical relief from the COVID-19 pandemic to revive travel and tourism industry.

- Government also initiated the Atmanirbhar Bharat Rozgar Yojana on 12th Nov 2021 to promote job creation during the post pandemic recovery period.

- Operational guidelines were formulated for safe resuming of travel and hospitality business and circulated amongst the sectors. It included COVID-19 hygiene and safety protocols.

- Furthermore, the Government also started SAATHI for creating awareness, training and assessing the hospitality industry workforce for effective application of the COVID-19 hygiene and safety guidelines in hotels, restaurants and various types of accommodations.

- Market Development Assistance scheme was initiated to financially support the hospitality service sector for promoting domestic tourism. It also included promotional activities like online marketing.
- The Ministry also channelized a series of webinars DEKHO APNA DESH to create awareness and motivate them for domestic tourism.

- The approvals or certification of hotels and other types of accommodation which were on the verge of expiry or expired were extended till 31st March 2022 by default. Similarly, the recognition of Tourist Transport Operators, Tour Operators and Travel Agents was extended by six months automatically.

- The new modified guidelines were given for the marketing to the Overseas Promotion & Publicity for the betterment of scope and reaching to the tourists worldwide.
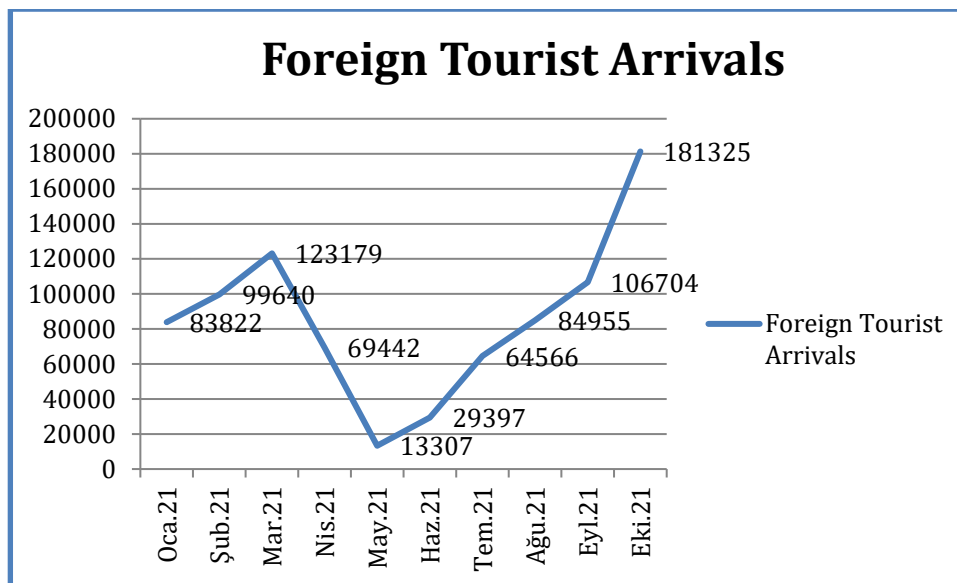
Figure 1: Impact of the supportive measures for Overseas Promotion & Publicity

The Ministry of Tourism with its intention to boost nouvelle type of tourism products has initiated the concept of caravans and accordingly are proposing and promoting Caravans and Caravan Parking parks. They have declared the plans of developing a world-class infrastructure in Kargil to develop it as an adventure and winter sport destination. Furthermore, the Road Transport and Highways Ministry has announced the scheme through which the tourist vehicle will receive an online All India Tourist permit within 30 days after submitting the application.

Efforts of State Government to boost tourism and hospitality industry post Covid-19:
The Maharashtra Government with an intention to promote "ease in doing business" approved new policies and became less stringent. This was basically towards recovering from the loss caused due to Covid-19 pandemic and uplifting the industry towards its dominance again.

The State Government reduced the number of licences required for the hospitality industry from 70 to 10. Initially, 15 NOCs were required from seven departments; this was changed to 9 self-certifications. The licence validity has been made for 5 years from the date of issue. These licences will be issued from a single window of the tourism department.

The state government also permitted 100% Foreign Direct Investment in Hotels via automatic route. Without any pre regulatory approval 100% FDI investment will be allowed in the hotel industry. 50% of the average foreign exchange earning value will be permitted on the duty of importing furniture and vehicles solely used for hotel, travel and tourism purposes. Hotels, tour operators and travel agents were provided a status of export house or trading house. Hotels ranging from one star and above categories were allowed for 5% duty credit equal to their foreign exchange earnings last year. Similarly, 20% of duty credit will be given to restaurants equal to the foreign exchange earned in last year. The hospitality industry and tourism sector was involved under the "Serve from India Scheme" under which they were allowed with Duty Credit Scrip. This credit can be utilized for importing capital goods like food items and alcoholic beverages from abroad.

Business Traveller (Aug 2021) in its article put forth the news of an announcement done by the Government of Maharashtra. It mentioned that the MTDC has upgraded its website and made it user friendly, it has also collaborated with online travel enterprises. State government has opened a boat club and shacks in Konkan introducing water sports. They have also signed anMoU with Make-my-Trip, Goibibo and Sky-high India to encourage adventure tourism. Government in collaboration with MSIHMCT, Pune is commencing with short term training programs for skills development of the workforce engaged in the hospitality sector.

Research Methodology:
Primary Data: The researcher has adapted a convenience sampling technique and interviewed 82 hoteliers based on a structured close-ended questionnaire. Their responses have been measured through a five-point Likert scale). The scope of the study was focused on the standard hotels and resorts in Raigad district which included Karjat, Matheran and Khalapur.

The data collected by the researcher is tested with the Chi-Square test.

Secondary Data: The researcher has collected the information from state government and central government websites, annual reports and internet websites.

Objectives of Study
1. To know the hospitality industry's expectations from the government to revive from the impact of Covid-19 pandemic.
2. To understand the efforts of the Central Government of India and State Government Maharashtra to boost tourism post Covid-19.
3. To analyse the significance of government support for the revival of hospitality industries from the impact of Covid-19 pandemic.

Hypothesis of the Study
H_0: Central Govt. of India /State Government of Maharashtra efforts in post pandemic era of Covid-19 has no significant relationship with the sustainability of the Hospitality industry in Maharashtra

Against,
H_1: Central Govt. of India /State Government of Maharashtra efforts in post pandemic of Covid-19 have significant relationship on sustainability of the Hospitality industry in Maharashtra

Data Analysis and Interpretation:

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
MC * BS	82	100.0%	0	0.0%	82	100.0%

Table 2: Case processing summary of chi square test

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	21.543[a]	1	.000		
Continuity Correction[b]	18.895	1	.000		
Likelihood Ratio	19.724	1	.000		
Fisher's Exact Test				.000	.000
Linear-by-Linear Association	21.280	1	.000		
N of Valid Cases	82				

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 5.12.

b. Computed only for a 2x2 table

Table 3: chi-Square tests

The above statistical table indicating the value column of the chi square tests table against the Pearson Chi-square static value is 21.543. The *p-value* is in the same row in the Asymptotic significance (two sided) is .000. The result is significant if the *p*-value is equal to or less than the designed alpha level (normally .05).
In the above case, the p- Value is less than 0.05. This indicates rejection of null hypothesis and acceptance of the alternative hypothesis that is "Central Government of India/ State Government of Maharashtra efforts in post pandemic of Covid-19 has significant relationship on sustainability of the Hospitality industry in Maharashtra.

The government confronted challenges to curb the losses of hospitality which was unbearable by the industry investors. The macro level efforts of the government had great positive impact on the sustainability of the hospitality industry.

Conclusion

Tourism is a global industry which involves millions of people travelling either domestically or at an international level. It acts as a significant contributor to the employment generation, foreign exchange, and global integrity (Mason 2003) The Tourism and hospitality industry has undergone a great setback due to the standstill because of lockdown when the Covid-19 attacked mankind. The pandemic in true sense was disruptive across the tourism and hospitality sector. Furthermore, numerous restrictions were laid down by the government on the hospitality industry for operating when Covid-19 mellowed down. This resulted in enormous difficulties for the industry while resuming the situation started becoming so worse in terms of financial liabilities, they felt shutting down the business was more beneficial rather than running it. The Central/ State Government has a very significant role to support the hospitality industry so as to revive and sustain. With lots of expectations the hospitality industry urged the government to consolidate. The hospitality and tourism industry wished to get support and help on the ground level so they can rise up and revive. The micro things like utility bills as per usage, moratorium in EMIs, statutory taxes, licences, fees etc. They wanted initial working capital funds so they can smoothly come back to the operations in normal mode. If this support is not timely provided to the industry it will go through a lot of hindrances. The chain or group of hotels will somehow survive and revive. But standalone and independent hotels will have to face total closure if they are not able to sustain.

The Government did a great job in managing all the challenges and problems, even though Covid-19 crisis was very new for them too. They took commendable efforts at macro level in creating a very positive atmosphere for the revival of the tourism and hospitality industry. Various schemes and policy modifications were done to support the reviving tourism and hospitality industry. The impact of these efforts will take at least one or two years to be seen. It focuses on increasing the domestic as well as international tourist turnover in the state and the country. This will further get a good business to the tourism and hospitality industry.

The hospitality industry seems to be more grieved with the approach of the government towards them in comparison with the other sectors of the economy. They feel to be under supported and undermined by the government even though they have been significant contributors to the GDP, Foreign Exchange Earnings and employment generation in the country. Their basic demands were not fulfilled about the utility bills which created a heavy burden of financial debt on them. As per the credit rating agency ICRA, the industry will take at least 2-3 years to recover and get back to normalcy.

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A STUDY OF INVESTIGATION OF PSYCHOLOGICAL CAPITAL'S EFFECTS ON LOYALTY AND PROFESSIONAL APPROACH

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ABSTRACT

Effective management of human resources is essential in today's environment of constant changes, yet it comes with a variety of philosophies of management as well as approaches. Research on psychological capital is the focus of this study, which means a favorable environment for the development of a person enabling self-help for overcoming obstacles (self-efficacy), optimistic hope for success (optimism), complete vigor (hope), as well as for reaching the goal though there are innumerable obstacles (resilience). This research intends to analyze all psychological capital ideas with employees' commitment to the company based on a survey of relevant literature and theory. The literature primarily concerned with psychological capital and its management is the best source of references.

The research sought to assess the effect of psychological capital on the goal of the organization due to the growing psychological capital approach in companies. Employees from both public and commercial enterprises with offices in Shillong, Meghalaya, made up the study of population. There were 200 participants in the research, and 165 of them made up the 165-person sample size. Aircel (Northeast Circle) and Idea are two of the private businesses that did the research (Zonal Office). NEEPCO (Northeastern Electric Power Corporation Ltd), MBDA (Meghalaya Basin Development Authority), Department of Fisheries, Department of Water Resources, Department of Labour and Employment, and Forest Department were among the government entities included in the research.

Respondents represented a variety of demographics, including gender, age, job type, educational background, and length of employment with the business. The delivered questionnaire was a compilation of five common questions that assessed employees' commitments to the firm as well as the four psychological capital categories of hope, self-efficacy, resilience, and optimism.

The main objective of the study is to demonstrate that psychological capital and commitment have a substantial link. Commitment was considered the dependent variable, whilst psychological capital was considered the independent variable. To understand the major relationship between every individual, psychological construct and overall commitment, as well as a data analysis gathered about the samples' demographics, were among the study's secondary objectives. These analyses led to some conclusions about the relationship between psychological capital and overall commitment.

Key words: Commitment, demonstrate Psychological, Capital, efficacy.

Introduction

One of the newest fields of organizational behavior and human resources study is psychological capital. While studying organizational behavior in the past, many therapists and academics focused on the skills and pathological behaviors of the workers to lessen deficiencies in them. Negative elements of employee conduct were not given enough attention. The research in this line in human behavior started in the 1990s, and techniques for positive organizational behavior were orientated.

In contrast to material assets, psychological capital, which includes human capital and social capital, is an organization's intangible asset. Psychological capital may be seen as a competitive advantage through investing in people (Luthanz, 2007). There has been several research on the connection between organizational components and psychological capital. The findings demonstrated a strong connection in respect of various psychological capital as well as favorable outcomes of the organization, including increased corporate citizen satisfaction, involvement, productivity, decreased absenteeism, and decreased anxiety.

Since human resources believed that the organization's competitive advantage would boost organizational performance and success, employees pledge to the maximum degree of satisfaction with the organization's aims and values (Cetin, 2011). Therefore, the organizational psychological capital components may have an impact on these developments.

In other words, workers who exhibit high levels of self-reliance, hope, optimism, and resilience may exhibit positive traits, higher levels of motivation, and greater loyalty to their employers (Nelson, 2007). Whereas the outcome of all initiatives taken to further management and organizational objectives promotion of new methods and instruments intended to boost performance is crucial.

In the last ten years, research have shown a connection in respect of psychological capital as well as performance of organization, employee happiness, and organizational commitment.

Positive psychological capital means ability deemed fundamentally motivating people, for achievement and consequent behavior in place of work. Positive psychological capital promotes positive methods, meanings, and outcomes. The positive aspects of people are hope, innovation, bravery, knowledge, responsibility, etc.—are the focus of psychological capital. Positive psychology is expected to contribute to and serve as the foundation for a lovely world if the positive human qualities are fully recognized.

The main ingredients required to create a psychological capital structure are the four core traits. Efficacy refers to one's impression or confidence in one's own talents, while optimism refers to a positive anticipation and is consequently less closely associated with one's real capacity. Hope means aspirations that directly affect how well a person performs at work. The last aspect of resilience is positive adaptation and the capacity to overcome difficulty.

Positive traits, whether individual or collective, may help build and preserve a positive psychological capital that is useful in both the workplace and daily life. Pleasant traits and beliefs will result in positive interactions and experiences.

Literature Review

A person's confidence in their capacity to succeed in pursuing the work's goals, as well as their willingness to accept obstacles with a positive outlook, are all characteristics of positive psychology. Ryan and coworkers, 2001. According to the definition given by Luthanz (2007), psychological capital refers to the good qualities and skills that workers, managers, and the overall culture of the business or firm possess. These qualities include self-assurance, hope, optimism, and resilience.

Bandura's (1997) says that idea of self-efficacy is sometimes referred to the confidence of an individual and a strong belief about his capability of doing a task successfully. Self-efficacy may be seen as an internal agent that controls how individuals carry out various activities and responsibilities in their lives.

According to Snyder (1991), hope is characterized as a road to achieving the objectives. The route is referred to as a strategy to accomplish desired objectives, while agency is a decision that guides the aims. Hope is energy directed toward one's own objectives and a path or other routes that lead one in the desired direction. To fulfill their employment needs, individuals might be motivated by hope.

A broad anticipation of a brighter future is what is meant by optimism (Kele, 2011). Positive thinking as well as wellness do keep favorable associations in respect of psychological capital (Hmieleski).

As briefly noted above, these four positive characteristics combine in a synergistic fashion, according to Bandura, making optimistic individuals more resilient and driven to cope with challenges in life. However, those who are self-assured may readily adapt and transmit their resilience and upbeat attitudes..

In order to convert these good behaviors to productivity in the rapidly globalizing world of today, firms should concentrate on the positive behaviors of their workforce. Because it gives individuals the chance for training and development, psychological capital may help people succeed.

Conceptual Model

According to research findings in the area of positive organizational behavior, psychological capital is made up of traits like optimism, self-efficacy, hope, and resilience.

In other words, it is apparent when several psychological factors are taken together (Avey. 2010). Positive psychology, including psychological capital, may thus be quantified in order to create management strategies based on them.

This concept states that individuals who anticipate high levels of self-efficacy, optimism, and resilience may

exhibit positive cognitive and behavioral traits, better motivation, more work satisfaction, greater organizational commitment, and high performance (Nelson, 2007).

Objectives
• To determine if psychological capital and commitment are significantly correlated or not.

Secondary Objectives:
• To determine if employee hope and organizational commitment are significantly correlated.

• To determine if employee self-efficacy and organizational commitment are significantly correlated.

• To determine if employee optimism and organizational commitment are significantly correlated.

• To determine if employee resilience and organizational commitment are significantly correlated.

• To determine if there is any meaningful association between certain psychological capital components and specific commitment components.

• To examine demographic information from the sample and draw conclusions on psychological capital and overall commitment.

Research Methodology
Questionnaire method
A questionnaire is a set of questions pertaining to a research work, systematically placed by the researcher for his respondents to fill in appropriate column as mentioned in the questionnaire related to self-confidence, hope, optimism and resilience, wherein 5 point Likert scale is used.
The population size is 200 respondents
The size of sample is 165
Sampling method is random sampling
For analysis of research SPSS statistical software Excel is use

The following questions are those that were part of the questionnaire but whose elimination would have improved the instrument's overall internal consistency and Cronbach's alpha, as seen in the above figure.

Regression Analysis
In order to determine the effect of psychological capital (an independent variable) on the total level of employee commitment, a multiple regression analysis has been conducted in this research (dependent variable).
Simple linear regression is expanded upon by multiple regression. When predicting the value of a variable based on the values of two or more other variables, this technique is used. The desired variabl

Hypothesis
H0:There is no significant relationship between employee self efficacy and organizational commitment.
H0:There is no significant relationship between employee resilience and organizational commitment.
Hypothesis Testing

Self Efficiency and Commitment

Model	ChangeStatistics				
	R SquareChange	FChange	df1	df2	Sig.F Change
1	.019	3.159		163	.077

Table no.1 Self Efficiency and Commitment

a. Predictors:(Constant), Over all Self Efficacy Score
b. Dependent Variable: Overall Commitment Score
  Null hypothesis accepted

Resilience and Commitment.

Model	Change Statistics				
	R Square Change	F Change	df1	df2	Sig.F Change
1	.023	3.905	1	163	.050

Table no.2 Resilience and Commitment.

a. Predictors:(Constant), Over all Resilience Score
b. Dependent Variable: Over all Commitment
   Null hypothesis accepted

Conclusion

The conclusion of the research is that the connection between psychological capital as well as commitment of employees are examined based on collected data in public sectors as well as private sectors of Shillong using the questionnaire approach. It was observed that there is no major relation between the sub aspects of psychological capital according to correlation analysis, which seeks to identify relationships between variables. Optimism has a favorable impact on organizational commitment, according to regression research that quantifies the impact of psychological capital subdimensions (self-efficacy, hope, resilience, and optimism) on commitment. Optimists' will to overcome obstacles in the workplace, persistence in accomplishing goals, evaluation of career chances, and favorable views regarding their employment and working circumstances may all be used to explain the positive association between optimism and organizational commitment.

Employees that have a high degree of commitment and psychological capital might be highly motivated. In this manner, they demonstrate their willingness to put in a lot of work on the organization's behalf. The organization will inevitably be surpassed as a result of this attempt. Welfare of employees has to be increased, effective communication has to be developed, a fair wage plan should be implemented, an organizational culture should be supported, an awards as well as punishment strategy has to be established. In order to maintain a strong commitment to the organization, the Human Resource department has to play a pivotal role and should be very effective.

The conclusion of research investigation is somewhat at odds with those of other overseas studies.

Naturally, their psychological capital will be impacted by the variations in institutional and non-institutional elements, among other things.

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A STUDY OF THE EFFECT OF EMOTIONAL INTELLIGENCE ON PERSONALITY DEVELOPMENT IN EARLY TEENAGERS IN PUNE CITY

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ABSTRACT
Current research is intended at finding the conclusion of emotional intelligence on Personality Development in Early Teenagers in Pune city. Conclusive research of Causal nature was conducted. Age groups thirteen to fifteen were considered as Early Teenagers. In all, a total 400 samples were collected through Simple random sampling from English medium schools in Pune city. The data was statistically analyzed using the Statistical Package for Social Sciences (SPSS). Making decisions and having leadership skills go hand in hand. According to gender, religion, and location of residence, the results showed statistically significant disparities in the emotional intelligence scores among the pupils. Academic success has been significantly predicted by emotional intelligence. There is a brief discussion of the results' implications and potential avenues for future empirical study.
Keywords: Emotional intelligence, personality development, academic achievement.

Introduction
The idea of emotional intelligence has received a lot of attention in academic works all over the world. A more widely accepted indicator of overall effectiveness in several fields is emotional intelligence (Joshi, 2012). Over the past two decades, measuring intelligence has been challenging since widely accepted research has focused on cognitive intelligence while neglecting non-cognitive dimensions, the most significant of which are the emotive ones (Samadony, 2007). Consequently, the idea of emotional intelligence emerged as a novel (Mayor & Salovey, 1990). Emotional intelligence has been a popular term in the academic community for almost ten years. In addition to IQ (Intelligence Quotient), EQ (Emotional Quotient) scores verifiable victories in every educator's effort to develop thorough, knowledgeable characters.

The capacity to recognize and categorize different emotions, regulate one's own and others' emotions, and use emotional information to influence behavior are all examples of emotional intelligence (Coleman, 2008). Since emotional intelligence is a fundamental element of both an individual's scientific and real-world existence, it has been known for years that intelligence alone would not ensure achievement. Instead, emotional intelligence is a precondition for success (Gardner, 1983; Mayer & Salovey, 1990; Goleman, 1995, 2009; Vincent, 2003; Khawaldeh, 2004; Rayyash, 2006). The idea of emotional intelligence is new, yet it already has a big impact on people's lives. It affects people's relationships, feelings, and opinions.

A different kind of intelligence is emotional intelligence. It entails being aware of your emotions and utilizing them to guide your life decisions. It involves having good self-control and the ability to restrain irrational urges. When working toward goals, it's being motivated and continuing to be hopeful and optimistic. Not only is it empathy—understanding how those close to you are feeling—but it's also social skill—getting along well with others, controlling your emotions in close interactions, and having the ability to influence or lead others.

One's capacity to recognize and control emotional cues and information is known as emotional intelligence (EI). EI is a broad category of non-cognitive abilities, skills, and competences that affect a person's capacity to successfully manage pressure and expectations from their environment. Since they interact with one another to provide people the chance to make wise decisions and have sound thoughts, emotions and thoughts and the mind and the heart have something in common. Even if a person is very intelligent, an emotionally disturbed or disoriented individual cannot control their emotions or moods (Rayyash, 2006). The ability to effectively assess one's own and others' emotions, to recognize various emotional reactions, and to use emotional knowledge to make wise judgements is known as emotional intelligence. People who are adept at managing relationships frequently exhibit self-awareness, self-control, and empathy, according to a renowned EQ specialist. "The perception of emotions in oneself and others, the understanding of these feelings, and the control of emotions" are the fundamental abilities needed for emotional intelligence. Collaboration and teamwork are essential for

success in the contemporary workplace.

According to Goldmen, EQ is made up of 5 main traits or attributes:
1. Emotional intelligence (self-awareness)

2. Controlling feelings (mood management)

3. Self-motivation (self-motivation)

4. Perceiving others' emotions (empathy)

5. Taking Care of Relationships (interpersonal skills)

Depending on the configuration of a set on this facet, each of these stages can lead to diverse group results. Extraordinary emotional intelligence can improvise work performance and its various features can contribute to effort in a different way. One facet of emotional intelligence is emotive introspection and individuals who are self-aware thoughtfully can make out their personal state of mind and how they will have emotional impact on his performances. Additionally, they can make a distinction of their personal emotional strong points and flaws, therefore in order to improve they can cultivate the strengths and avoid the weaknesses during work.

Another significant feature of emotional intelligence is demonstrative self-control which means one can sidestep tensions and other upsetting mental state. This is actually useful for those who work in hectic spaces or deal with unfriendly persons. Emotional intelligence has some limits to a certain level that success can be attained with the addition of to some other points. Although children are born with a variety of temperaments—social, laid-back, intense, shy, etc.—EQ aids parents and teachers in utilizing these traits so that kids may function better in the real world.

Research Methodology
Problem Identification:
To research how early adolescent personality development is impacted by emotional intelligence.

Objectives:
1.   To research how EI affects personality development in relation to gender, age, siblings, and mother's employment situation.
2.   To identify whether there exists any relation between decision making and leadership.
3.   To identify whether there exists any relation between stress management and relationship management.
4.   To identify whether there exists any relation between academic orientation and distraction.

Hypotheses:
1.   There may not be any relation between decision making and leadership ability.
2.   There may not be any relation between stress management and relationship management.
3.   There may not be any relation between academic orientation and distraction.

Research Design:
Conclusive research of Causal nature

Sampling method:
Simple random sampling.

Sample size:The total samples collected were around 400 but after editing missing entries, 258 were accepted.
Sample area:
The sample area was English medium schools in Pune city.

 Data sources:
1. Primary sources- Surveying method was used in various English medium schools in Pune city like Abhinav English Medium School, S.M. Choksey Highschool, City International School, Sinhgad Public School. Questionnaire consisted of 20 questions describing various traits like decision making, leadership, anger, jealousy, relationship management, stress management, distraction and academic orientation in Multiple Choice Question format.
2. Secondary sources- Ph.D. dissertations, Research papers, journals, reference books etc.

Data Analysis And Design

➢   This graph indicates the percentage wise distribution of the population according to gender, age, mother working and siblings.
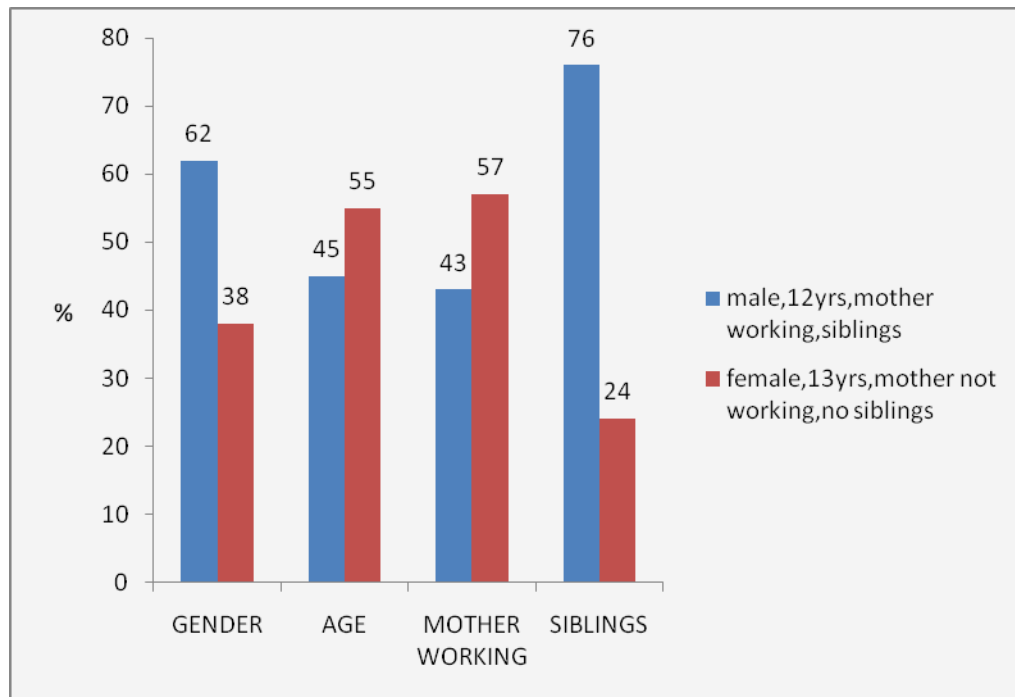
Graph 1: Percentagewise Distribution

➢   This graph indicates highest option preferred by the population in each personality trait
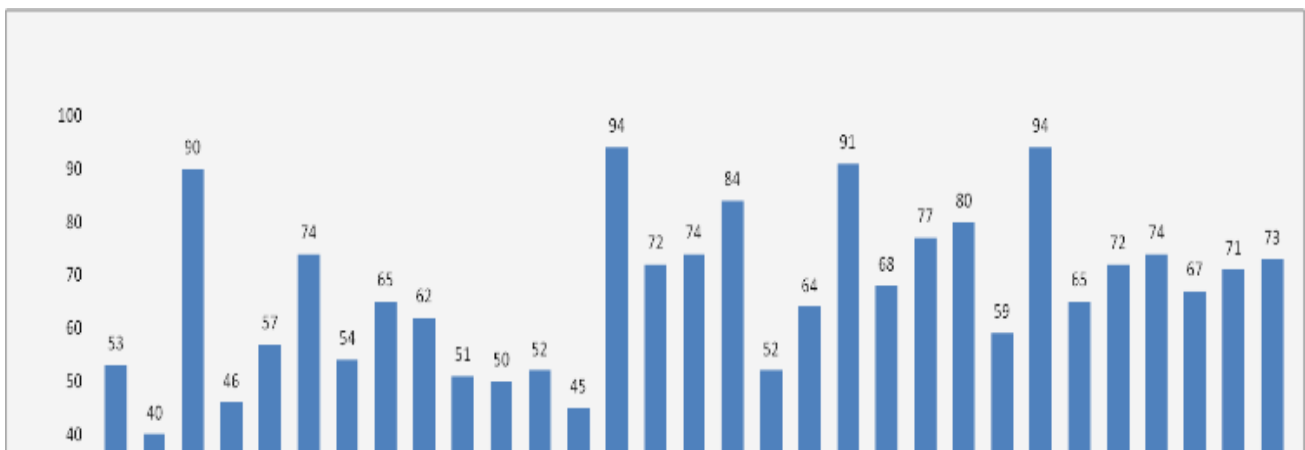
Graph 2: Highest option preferred by the population

4.1 Chi-Square Test
Hypotheses Testing:

1. Relationship between decision making and leadership ability is calculated by using chi-square test.

H₀= There may be no relation between decision making and leadership

	DECISION MAKING						
LEADERSHIP	Q1	Q7	Q8	Q15	Q19	Q20	**TOTAL**

Q4	118	143	134	109	49	70	623
Q20	79	80	84	68	36	81	428
TOTAL	197	223	218	177	85	151	1051

Table 1: Decision Making

5% level of significance, 5 degrees of freedom, and a tabulated value of X^2 equals 11.07.
$X^2 =13.726$ in the calculation. The null hypothesis is rejected since the calculated value is higher than the tabulated value. Therefore, there is a connection between leadership and decision-making.

1. Relationship between academic orientation and distraction is calculated by using chi-square test.

H$_0$= There may be no relation between academic orientation and distraction.

	ACADEMIC ORIENTATION		
DISTRACTION	Q6	Q13	TOTAL
Q5	77	63	140
Q12	110	83	193
Q14	77	59	136
Q18	99	74	173
TOTAL	363	279	642

Table: 2 Academic Orientation

5% level of significance, 3 degrees of freedom, and a tabulated value of X^2 equals 7.815
X^2 has a calculated value of 0.149. As a result of the null hypothesis being accepted and the computed value being less than the tabulated value, there is no relationship between academic orientation and distraction. Relationship between relation management and stress management is calculated by using chi-square test.

H$_0$= There may be no relation between relation management and stress management

	RELATION MANAGEMENT				
STRESS MANAGEMENT	Q3	Q7	Q11	Q17	TOTAL
Q9	161	110	130	139	540
Q10	174	123	146	150	593
Q16	178	133	139	145	595
TOTAL	513	366	415	434	1728

Table 3: Relation Management

Value of X^2 in the table at 6 degrees of freedom and 5% level of significance is equal to 12.95. X^2 's calculated value is 0.73. The null hypothesis, which states that there is no relationship between relationship management and stress management, is accepted because the computed value is less than the tabulated value.

Findings
Working mother
1. For students whose mother is working, they make decisions themselves regarding joining tuitions and

whose mother is not working depend on the parent's decision.

2. In the case of shopping for clothes, children whose mother is working choose their own clothes, whereas other children whose mother is not working take clothes according to parent's choice.

3. In case of an accident students whose mothers are working will call someone to help the needy, whereas students whose mothers are not working, say they will themselves help them.

Age wise

1. In age group 12, 46% of children will try to help the person in the accident & 52 % of them will call others to help him.

2. Whereas in age group 13, 56% will help that person & 40 % of them will call others for help.

3. It was observed that 12 yrs children will ask others whereas in 13yrs they themselves will help that person.

Sibling

1. If angry, students having siblings try to engage themselves in some hobby & move out of that situation & those without siblings keep quiet and calm themselves.

2. While shopping students not having siblings select clothes of their choice while those having siblings ask their brothers or sister's choice.

Gender wise

1. It is observed that in case of boys their parents take decisions for tuition while in case of girls they decide on their own.

2. In shopping, boys decide which clothes to buy while girls go with their parent's choice.

Association

As per chi-square test there is strong association between decision making and leadership ability, and no association between stress management and relation management, and academic orientation and distraction.

Suggestions:

1. It is found that children whose mothers are working have better decision making capacity than non-working mothers, so non-working mothers should try to inculcate decision making capability in their child as it has association with leadership quality and self sufficiency.

2. Females are more dependent on parents for taking decisions whereas males take their decisions on their own, so parents and schools should take care that girls take more initiative in different activities to boost decision making capacities and leadership qualities.

3. Anger management gets difficult as age increases so special counseling sessions should be arranged for students.

4. Jealousy factor is more prominent in smaller age groups so parents should see that their kids have no jealousy problem with their siblings or friends and they should have healthy competition.

5. Distraction is more maturely handled by girls and students whose mothers are working so parents must speak with their kids and help them to concentrate on their studies and make them more emotionally stable.

6. Girls are sincerer in academics so schools can counsel boys on self-awareness, and motivate them to be serious with their academics than girls.

7.

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A STUDY OF THE IMPACT OF INTERIOR PHYSICAL EVIDENCE ON CONSUMER BEHAVIOUR

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ABSTRACT
Interior physical evidence is an important source of information for consumers' assessment and evaluation of store interiors. In this paper, we explore the impact of various types of interior physical evidence on consumer behaviour. The study is based on a self-administered survey questionnaire to which 96 participants who visit branded garment retail outlets responded in detail. The results of the study indicate that the consumer evaluation of the store interior can be associated with the type of physical evidence used by the consumer. The results from regression analysis also demonstrate that consumer evaluation is dependent on the physical evidence used. The findings suggest that developers and marketers can use this information to influence consumer response to various interior features in retail stores to enhance customer experiences in high-end stores and more effective marketing strategies.
Keywords: Interior physical evidence, Affective & Cognitive Components, Influence of Interior Physical Evidence

Introduction

The study of consumer behaviour is a significant issue in marketing and business research. Consumer behaviour can be defined as the interrelationship between the consumer, products, and environments where consumers experience, learn, adapt and accept as an input for their decisions (Saudamini, 2005).

It has been found that the design of spatial environments has a great impact on customers' experience (Barthes, 1978). In addition to the physical setting of the store environment it is also important to understand how these settings affect customer behaviours. This can be seen through interior perception. Interior perception deals with an individual's sense or perception of an environment including their interpretation of it (Whitcomb & Kiesler, 1977). Interior perception can be directly related to consumer behaviour.

In the study, the researcher investigates the relationship between interior perception and consumer behaviour. The survey method was used to ask customers to evaluate their attitude and their behaviour towards a branded garment retail store by using various types of physical evidence. The study is based on a self-administered questionnaire to which 96 participants who visit branded garment retail outlets responded in detail. The researcher also analyses the results from regression analysis as an alternative method to further identify these effects. The goal is to determine how various types of physical evidence can affect consumer perceptions, attitudes and behaviours.

Physical evidence refers to items or features that are normally found in any retail environment (Iverson & Kiesler 1978). Various types of physical evidence can be used by consumers to determine their perception of a retail environment. These physical features can be used to view the environment as a whole and determine if a store is well maintained.

The types of physical evidence used in this study are interior spacing, interior architecture layout, colour scheme and furnishings which include displays, lights, music and people.

Affective component refers to an individual's liking of or attitude towards an object (Hassenzahl & Tractinsky 2002). People form an attitude based on their perception of the product, its attributes, the quality of their service perceived by consumers which is influenced by their personal characteristics (Niehoff & Gefen 1999).

Cognitive component refers to an individual's knowledge about something. It also can refer to their knowledge of their own actions. Consumers have a perception of the store's physical elements, and they use this information to form an evaluation of the interior.

The study investigates the effects of the Interior Physical Evidence on the customer's behaviour. The researchers do this by considering customer behaviour as a process that occurs within a context where goods are bought and sold (Lanier 2001).

Literature review

The impact of interior perception on customer behaviour was investigated by Ray (1988). He defined interior perception as the customer's response to the shopping experience. He found that the actual condition of a store, such as its physical appearance, noise level and location of services had very little effect on the overall customer satisfaction. Instead, customers base their attitude towards a store on factors, such as its layout and design, interior features, and service environment.

Jalan (2018) in his study on the effect of interior perception on customer service experience, he found that the customers' expectations regarding the quality of service and cost they will receive in a store can be affected by various factors, such as the quality of store's physical setting, colours, and furnishings. The results of the study suggest that the customers' perceptions of the physical store environment can be based on their own subjective and cultural experiences (Jalan, 2018).

The study by Chawla and Mehrabian (2005) suggested that various physical features in retail stores should be considered to achieve a better customer experience for both the consumer and retailer. Customers should be influenced to form attitudes towards a retail setting based on their perception of the interior characteristics which include, floor plan configuration, layout of interior elements, color scheme, furnishings, displays and other aspects (Chawla & Mehrabian 2005).

The study by Acheson. (2005) found that the affective component of customer behaviour had a strong effect on the customer's perception of interior which included, color, lighting, and overall decor. Therefore, any improvements in the physical setting of a store can enhance the customers' experience.

The effects of interior perception on consumer behaviour were examined by Lee & Wang (2004). They looked at how interior factors affected main purpose activities and shopping behaviours. The study found that urban retail environments have been the primary focus for many retailers as it determines how customers are influenced by different factors such as physical features and layout of stores.

Mika & Zhou (2012) conducted a survey on an employee's perception and attitude towards interior design which comprised various elements of the in-store environment. They found that layout was found to be more important than colour or lighting options in terms of employee attitudes. The study also shows that employees who spend more time with customers have more positive attitudes towards how well stores are run.

The study by Ramaprasad (2008) looked at the factors that influence customer satisfaction while shopping in retail stores. He found that customers are influenced by the layout, arrangement, and colour scheme of an interior. Customers feel more satisfied when they perceive an environment as having a purpose.

Singh (2018) conducted a study on a retail store which included the physical elements of the store's interior design. He found that the quality of the store's physical setting, colours and furnishings are meaningful to customers' perceptions, attitudes, and behaviours towards stores. The findings suggest that interior perception affects customer service experience at stores.

The study by Lee (2015) also investigated the effects of interior perception on customer behaviour. The research shows that customers are influenced by the layout, arrangement and colour scheme of an interior. Customers feel more satisfied when they perceive an environment as having a purpose.

According to Lambe (2016), the effects of physical setting on customer behaviour can be modified through the usage of different approaches such as, colour palettes, qualitative elements, building design and layout; these could be used in retail store's interior design to attract customers and increase their satisfaction towards the store.

The most common and popular approach in using colour in retail store's interior design is the Limelight Colour Scheme. Limelight Colour Scheme uses a combination of primary hues each within the Pantone Matching System which consists of 13 standard colours, red, yellow and blue. The scheme is based on the measurement of light reflectance and transmission of colours as perceived under a light source with a specific spectral distribution and intensity. Pantone colour matching system was first introduced in 1963 and since then it has been the standard used in the printing industry (http://www.pantone.com/pages/pgfx-graphics/profiles.html). The Pantone colour matching system allows the use of a single hue and screen size that can be printed on various base types (fabric, paper, plastics) to produce predictable colour results (Graves, 2001).

The research shows that the use of colour in retail stores can be an effective tool for increasing customer satisfaction due to the following factors: 1) colour influences customer's behaviour, 2) there is a psychological effect on customers in terms of perception, attitudes, and behaviours towards a store and 3) it can be used as a tool for creating different visual merchandises.

The study by Jung. (2015) found that Pantone's colour matching system has been used as a guide throughout the interior design process which enables retailers to manage and implement changes quickly. On the other hand, the studies done by Berends and Giltay (2001), Borchert (2006), Acheson. (2005) and Lee & Wang (2004) suggest that it is difficult to control the effects of colour on customer behaviour due to various factors such as, the interaction of colours, lighting and physical setting of a store. This suggests that designing a retail store involves a trade-off between perception and attitude towards various aspects such as, layout, arrangement, and colour scheme.

The study by Mehra (2005) suggested that interior design is considered as an important factor for customers to form their attitudes towards a retail setting based on their perception of the interior characteristics which include, floor plan configuration, layout of interior elements, colour scheme and furnishings. The factors that influence customer attitudes towards a store's interior were found to be associated with service and product quality. The study also shows that customers who feel more confident about their ability to navigate around the store are likely to be more satisfied with their shopping experience (Acheson., 2005).

The study by Shah. (2008) looked at the factors that influence customer satisfaction while shopping in retail stores. He found a significant positive relationship between overall satisfaction and the presence of lighting, flooring, carpet, and display equipment in addition to layout of goods displayed, arrangement of products and colour scheme. If a retail store has an interior design which positively affects customer's attitude towards a store, then they are more likely to return again.

However, there is paucity of research on the subject of the relationship between the interior perception effects of the colour scheme and interior quality perceptions. The research done by Singh & Nayak (2018) looked at the factors that influence customer satisfaction while shopping in retail stores. They explored how interior perception affects customer service experience at stores. The findings were consistent with prior literature suggesting that when employees feel positive about their work environment, they are also more satisfied with their work, and this is reflected by providing friendly service to customers in a store.

The studies done by Lambe (2016), Lee. (2015) and Lee & Wang (2004) looked at the effects of colour on customer satisfaction. They found a significant positive relationship between colour scheme and customer satisfaction.

There is a gap in the research done on the relationship between interior perception effects of the colour scheme and interior quality perceptions. There are very limited studies available on how interior perception affects customer service experience at stores.

The current research study explored how customers' perceptions of a store's interior quality will influence their attitudes towards the store, as well as their overall customer service experiences while shopping at stores.

By exploring these relationships, this study will provide useful information and findings to aid retailers to improve their business performance.

A store is not only a place where consumers come to purchase goods and services but more importantly, it is the place where businesses promote their brand image to target audiences and build relationships with customers (Covey & Spreitzer, 2004).

The current study extends the literature by looking at the effects of colour on customer experience in terms of customer attitude and their satisfaction with a store's interior quality perception. It also explores how the factors used in interior design including lighting, flooring, music and furnishings affects customer behaviour towards a store's interior. Thus, the current study bridges an important gap in the current literature.

Objectives of the study
To study the store interior physical evidence as an important source of information for consumers' assessment and evaluation of store interiors.

To study the impact of interior physical evidence on the consumer buying behaviour.

Hypothesis
H1: Location design, lighting, music, air quality, colours and furniture have a profound impact on the consumer buying behaviour.

Scope of the study
Geographical Scope: The study considers the branded garment retail shops or factory outlets in Pune City, Maharashtra, India.

Functional Scope: The study considers the parameters of store interior including location design, lighting, music, air quality, colours and furniture.

Theme: The study considers the consumer buying behaviour in relation to various features of store interior.
Study Period: The study considers the period from Oct 2022 to January 2023.

Method
For the purpose of the study, the following technique was established to collect primary data.

a.   Using convenience sampling, select 96 people from Pune who purchase at branded retail or manufacturing locations to serve as our sample.
b.   Construct and validate a questionnaire for determining the influence of the location's design, lighting, music, air quality, colour scheme, and furniture. The questionnaire should include at least ten questions.
c.   Request replies using a Likert scale with a range of 0 to 5.
d.   Carry out the survey and compile an executive summary of the replies.
e.   Conduct regression analyses and evaluate how well the model fits the data. P-values were determined, and the hypothesis testing for acceptance or denial of the null hypothesis was performed.

Results

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	18-30 years	6	6.3	6.3	6.3
	31-40 years	19	19.8	19.8	26.0
	41-50 years	49	51.0	51.0	77.1
	51-60 years	18	18.8	18.8	95.8
	Above 60 years	4	4.2	4.2	100.0
	Total	96	100.0	100.0	

Table no 1. Age of respondents.

The above table shows that 19.8% of the respondents were belonging to the age group of 31-40 years. 51% of the respondents were from the age group of 41-50 years, and 18.8% were from 51-60 years group. The rest 6.3% and 4.2% belonged to the 18-30 years and above 60 years age group respectively.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	48	50.0	50.0	50.0
	Female	48	50.0	50.0	100.0
	Total	96	100.0	100.0	

Table no 2. Gender of respondents.

The gender distribution of the respondents was almost equal, with 50% males and 50% females. This indicates that both genders were represented equally in the survey.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Business	13	13.5	13.5	13.5
	Salaried Employee	33	34.4	34.4	47.9
	Self Employed Professional	13	13.5	13.5	61.5

Housemaker	12	12.5	12.5	74.0
Student	22	22.9	22.9	96.9
Other	3	3.1	3.1	100.0
Total	96	100.0	100.0	

Table no 3. Occupation of respondents.

The majority of the respondents, 34.4%, were Salaried Employees followed by Students (22.9%), Self-employed Professionals (13.5%) and Business Owners (13.5%). 12.5% of the respondents were Housemakers and 3.1% belonged to other occupation categories.

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 0-50000	15	15.6	15.6	15.6
50000-1 lakh	20	20.8	20.8	36.5
1 lakh-5 lakhs	29	30.2	30.2	66.7
5 lakhs-10 lakhs	27	28.1	28.1	94.8
Above 10 lakhs	5	5.2	5.2	100.0
Total	96	100.0	100.0	

Table no 4. Income of respondents.

The Income Distribution shows that 30.2% of the respondents had an annual income between 1 lakh to 5 lakhs, followed by 28.1% with an annual income between 5 lakhs to 10 lakhs and 20.8% earning between 50,000 -1 lakh annually. 15.6% respondents fell in 0-50000 category, and 5.2% had an income more than 10 lakhs annually.

	No Impact at all		Less Impact		Average Impact		Fair Impact		Maximum Impact	
	Count	Row N %	Count	Row N %	Count	Row N %	Count	Row N %	Count	Row N %
Location Design	3	3.1%	11	11.5%	16	16.7%	33	34.4%	33	34.4%
Lighting	4	4.2%	16	16.7%	16	16.7%	26	27.1%	34	35.4%
Music	3	3.1%	20	20.8%	15	15.6%	24	25.0%	34	35.4%
Air Quality	2	2.1%	34	35.4%	9	9.4%	6	6.3%	45	46.9%
Colours	4	4.2%	18	18.8%	14	14.6%	15	15.6%	45	46.9%
Furniture	4	4.2%	15	15.6%	11	11.5%	21	21.9%	45	46.9%

Table no 5. Level of Impact on the Buying Behaviour.

The table shows that 34.4% of the respondents felt that location design had maximum impact on their buying behaviour, followed by 34.4% considering it to have fair impact. 16.7% thought it had an average impact and 11.5% said less impact on their buying behaviour while only 3.1% considered it to have no impact at all.

The table shows that 35.4% of the respondents felt that lighting had maximum impact on their buying behaviour, followed by 27.1% considering it to have fair impact. 16.7% thought it had an average and less impact respectively on their buying behaviour while only 4.2% considered it to have no impact at all.

The table shows that 35.4% of the respondents felt that music had maximum impact on their buying behaviour, followed by 25.0% considering it to have fair impact and 20.8% thinking it has less impact respectively on their buying behaviour. 15.6% thought it had an average impact while only 3.1% considered it to have no impact at all.

The table shows that 46.9% of the respondents felt that air quality had maximum impact on their buying behaviour, followed by 35.4% considering it to have less impact. 9.4% thought it had an average impact and 6.3% said fair impact on their buying behaviour while only 2.1% considered it to have no impact at all.

The table shows that 46.9% of the respondents felt that colours had maximum impact on their buying behaviour, followed by 18.8% considering it to have less impact and 15.6% thinking it had fair impact respectively on their buying behaviour. 14.6% thought it had an average impact while only 4.2% considered it to have no impact at all.

The table shows that 46.9% of the respondents felt that furniture had maximum impact on their buying behaviour, followed by 21.9% considering it to have fair impact and 15.6% thinking it has less impact respectively on their buying behaviour. 11.5% thought it had an average impact while only 4.2% considered it to have no impact at all.

Overall the table shows that the respondents considered air quality, colours and furniture to be the most influential factors on their buying behaviour. The least influential factor turned out to be location design. Music and lighting were also found to have an impact on the buying behaviour of the respondents.

It is important for marketers and retailers to understand the key factors that influence consumer decision making in order to create effective marketing strategies. Knowing which factors have a great impact on customer's purchase decisions can help them tailor their campaigns accordingly and provide customers with a better shopping experience.

Thus, the data collected from this survey provides useful insight into how different factors such as income, location design, lighting, music, air quality and furniture influences consumer purchasing behaviour.

Testing of the hypothesis

Model	Variables Entered	Variables Removed	Method
1	Furniture, Location Design, Music, Lighting, Colours, Air Quality[b]	.	Enter
a. Dependent Variable: Buying Behaviour			
b. All requested variables entered.			

Table no 6. Variables Entered/Removed.

The dependent variable was Buying Behaviour and Furniture, Location Design, Music, Lighting and Air quality are the independent variables.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.770[a]	.593	.566	.92489
a. Predictors: (Constant), Furniture, Location Design, Music, Lighting, Colours, Air Quality				

Table no 7. Model summary.

The regression coefficient indicates that the model is accurate enough to predict 59.3% of the variation in the outcomes. This indicates that the model is fit enough. The values for R and R2 may be found in this table. A high degree of correlation is indicated by a value of 0.770 for the R value, which stands for the simple correlation. This value may be found in the "R" Column. The value of R2, which can be seen in the column labelled "R Square," reflects the percentage of the total variation in the dependent variable, Buying Behaviour, that can be attributed to differences in the levels of the independent variables. 59.3 percent of this data can be explained, which is a large amount.

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	111.107	6	18.518	21.648	.000[b]
	Residual	76.132	89	.855		
	Total	187.240	95			
a. Dependent Variable: Buying Behaviour						
b. Predictors: (Constant), Furniture, Location Design, Music, Lighting, Colours, Air Quality						

Table no 8. ANOVA.

This table indicates that the regression model predicts the dependent variable significantly well as the P value is lesser than 0.05. We thus reject the null hypothesis and accept that the Location design, lighting, music, air quality, colours and furniture have a profound impact on the consumer buying behaviour.

Conclusion

This survey provides valuable insight into how different factors influence consumer buying behaviour. It was found that air quality, colours and furniture had the maximum impact on the buying behaviour of the respondents, followed by location design, lighting and music. Marketers can use this data to create better marketing strategies tailored to their customers' needs and provide them with a more enjoyable shopping

experience. Understanding which factors have an impact on purchase decisions is key in creating effective campaigns that result in higher sales numbers.

In conclusion, it is important for marketers to understand these factors and use them to develop targeted campaigns that will help increase customer engagement and satisfaction. By understanding what motivates customers to make purchases, businesses can establish better relationships with their target audience and ultimately achieve success.

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A STUDY ON ASSOCIATION BETWEEN DRIVERS OF EMPLOYEE ENGAGEMENT, EMPLOYEE SATISFACTION AND EMPLOYEE COMMITMENT USING STRUCTURAL EQUATION MODELING

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ABSTRACT
According to the Department of Food and Public Distribution under the Government of India, the sugar industry influences the rural way of life for around 50 million sugarcane growers. Molasses, a by-product of the sugar industry, is the primary ingredient in the production of ethanol, which is an agricultural product. When there is a glut of sugarcane on the market and prices are low as a result, the sugar business is unable to make timely payments of cane prices to the farmers who grow the crop. The Central Government imposed stock holding and turn over limitations on sugar to maintain an acceptable level for sugar prices and to ensure a steady supply of sugar for consumers. This was done with the goal of keeping sugar prices at a reasonable level. The study of the sugar industry is therefore very essential. The sugar manufacturing industry is staff driven, and as a result, it is critical to analyze structures. The present study aims to study the effect of EE on employee job satisfaction and EC. Using causal research, the association between Employee engagement (EE), employee satisfaction (ES) and employee commitment (EC) are studied. The relation is established using structural equation modeling.
Keywords: Employee engagement, employee satisfaction and employee commitment

Introduction
The sugar business is a significant part of the agricultural sector that influences the way of life in rural areas for over 50 million sugarcane growers and approximately 5 lakh workers who are directly employed in sugar mills. Additionally, employment opportunities are created in a variety of ancillary businesses related to transportation, trading, the servicing of machinery, and the provision of agricultural inputs. Both the largest producer and consumer of sugar in the world can be found in India. Brazil is India's nearest competitor in the sugar industry. The annual production of the Indian sugar industry is currently valued at around 80,000 crores of rupees. As of the 31st of July 2017, the country has a total of 732 operational sugar factories, each of which had adequate crushing capacity to generate around 339 lakh MT of sugar. The capacity is split evenly between units belonging to the private sector and those belonging to the cooperative sector. In addition, a person who is paid to work for another person or company is referred to as an employee of that person or company. The concept of a worker's "EE," which refers to how enthusiastic and committed they are to their work, originates in the field of human resources. EE measures how enthusiastic and dedicated a worker is toward their employment (HR). Employees who are engaged in their jobs and the performance of the organization as a whole care about both, and they have the impression that the contributions make a difference in both areas. A worker who is driven by factors other than financial gain is said to be engaged in their work. They may even be under the impression that their level of contentment is inversely proportional to the amount of work they get done and, as a result, necessary to the development of their company.

The study aims to review and compare various EE practices in different cooperative sugar industries. The researcher also focuses on studying the factors of EE, ES and EC. Based on basic factors, the study attempt has been made to establish a relationship between EE, ES and EC. Researcher also focuses to determine the important EE drivers for organizations performance in cooperative sugar industry.

Literature Review
Employees are an essential part of every business. If a company wants to be competitive, it must maintain a high level of employee involvement in all tasks that advance its objectives. The success of the company and its goals

must inspire everyone who works there to be enthusiastic, driven, and committed. There must be a significant intersection between what the employer expects of the employee and what the employee expects from the employer. The term "EE" was first used by Kahn in 1990 and was then published in a scholarly journal. Since then, it has evolved and proven that keeping employees engaged at work is of the biggest importance among the numerous resources available to businesses.

People's perceptions of engagement and disengagement are influenced by their own definitions of engagement and disengagement, as well as their level of participation in their professional function and personally in those they employ and express themselves. Energy, involvement, and efficacy are the three components that define engagement, in contrast to the three characteristics of burnout that are fatigue, cynicism, and a lack of feeling like one's efforts are making a difference.

Organizational outcomes
Employee retention
Both Levinson (2007) and Demourouti. (2001, quoted in Sonnentag, 2003) concluded that involvement in one's place of employment does, in fact, positively correlate with commitment to the organization. Research conducted by Levinson (2007) and Demourouti (2001) came to the same conclusion: there is a positive correlation between EE at work and organizational commitment. According to Levinson (2007a), employees who are content in their jobs are more likely to remain with the organization in which they are employed. According to Demourouti (2001)'s research, EE at work is correlated favorably with organizational commitment.

Employee productivity
Employees whose motivation derives from causes external to themselves tend to have higher levels of productivity. Some examples of such reasons include involvement with their work and company. When compared to their colleagues who are disengaged, they exhibit a more acute attention to detail and a higher level of internal motivation. This suggests that they work in a manner that is both more productive and always keeps the success of the business in mind.

EC
Organizational commitment is complex to describe, and the definitions found in the commitment research lacks consensus. Nevertheless, Meyer and Allen (1991) established a three-component model of commitment that has a significant amount of empirical validity. Affective commitment refers to an individual's emotional ties to his or her organization, while continuation commitment refers to an awareness of the costs associated with leaving one's organization, and normative commitment refers to the individual's adherence to the organization's values and standards (feeling an obligation to stay with the organization). According to (Meyer & Allen, 1997) affective commitment may be thought of as the desire to remain with an organization, continuity commitment can be thought of as the necessity to remain, and normative commitment can be thought of as the feeling that one ought to remain with the organization. The notion that commitment is a key criterion variable for evaluating how organizational change affects the organization-employee relationship is relevant to this study (Armenakis & Bedeian, 1999). The state in which individual employees match themselves to the occupation is defined as commitment. Job, responsibility, and in this way, they are completely dedicated and strive to attain organizational goals and objectives. Employees that are engaged and committed are interested in their jobs and devoted to tasks and challenges to attain the goals and objectives. It will result in highly productive employees who will be recognized as the organization's assets.

ES
Another important parameter in the study of EE is the ES. ES reflects how well an individual's interests and aspirations are met and how other employees perceive this. Different academics define ES differently, but it's commonly seen as *"the scope of the work and all the favorable sentiments about the work environment"* (Staples and Higgins, 1998) and can only be achieved if the parties view each other as consumers to fulfil. In recent years, organization and management behavioral research have emphasized that ES is crucial both for employee and the organization. Finding strong and crucial relationships between absenteeism, employee turnover, and organizational loyalty in several research have led to a greater understanding of the relevance of ES. Many researchers have questioned whether employee happiness and life satisfaction are related (Chacko, 1983; Tait, 1989; Howard and Frink, 1996). Many senior managers have pushed their companies to focus on ES.

Structural Equation Modeling:
In the field of multivariate statistical analysis, SEM is a tool that is used to investigate structural relationships. To investigate the structural connection that exists between measured variables and latent constructs, this technique combines component analysis and multiple regression analysis. This approach is used by the

researcher because it allows for the estimation of a wide variety of interdependent relationships within a single investigation. This strategy makes use of two categories of variables, namely endogenous variables, and exogenous variables. Endogenous variables are identical to dependent variables, and their values are identical to those of the independent variable.

Methdology

A. Objectives

To study the effect of EE on employee job satisfaction and EC.

B. Hypothesis

H_1: There is a significant positive effect of EE on employee job satisfaction.
H_2: There is a significant positive effect of EE on EC.

C. Sample design and Sample Size

Sample size determination using mean method. Sample size was determined using sample size determination by mean method. Variables in study were measured using a 5-point measurement scale, hence the mean method was adopted. Formula

$$N = \frac{z^2 * s^2}{e^2}$$

Where, 'z' is the standard score associated with confidence level (95% in the current case). Hence standard scores equal to 1.96 (borrowed from normal table). 'S' is the variability in the data set, computed as a ratio of range / 6. Range is equal to 5-1 = 4 (the difference between minimum and maximum value in the 5-point scale). 6 refers to ±3 standard deviation values on the X axis of the standard normal curve, which takes in all the data set in study.

Hence S = 4/6 = 0.66

E is the tolerable error = 6% (in the current study).

Sample size n = $\frac{1.96^2 * 0.66^2}{0.06^2}$ = 463

To deal with non-responses a size of 10% respondents is taken as buffer

463*0.1 = 46, 463 + 46 = 509

Hence, questionnaires were distributed to 509 employees of sugar factories, however 14 questionnaires were discarded for incompleteness, hence the final sample size is 495.

D. *Research design*

The study is causal in nature elaborating on the DEE on EE, ES and EC.

E. *Data Collection*

For the present research a structured questionnaire was used as a tool to collect primary data. The target respondents were approached through an internet-based and physical survey. To reach till the respondents E-copies of the questionnaire were distributed in Google forms to get prompt responses. Secondary data was collected for literature review and theorization from various sources like books, journals, magazines, internet articles, Bank Website etc.

F. *Constructs under the study.*

The tables below show the constructs under the study and codes used for the research.

DEE	
Job satisfaction	JS
Family-friendliness	FF
Cooperation and communication	CC
Health and safety	HS
Pay	Pay
Conditions and benefits	CB
Equal opportunities and fair treatment	EOFT
Performance and appraisal	Pay
Immediate management and training	IMT
Development and career	DC

TABLE I.   DEE

EE	
At my work, I am bursting with energy and enthusiasm (EE1)	EE1
At my job, I feel strong and energized (EE2)	EE2

I am energetic about my job (EE3)	EE3
My work motivates me (EE4)	EE4
I feel like going to work when I wake up in the morning (EE5)	EE5
I feel cheerful when I'm working seriously (EE6)	EE6
I am pleased with the work that I do (EE7)	EE7
I'm completely absorbed in my task (EE8)	EE8
When I am working, I easily get carried away (EE9)	EE9

TABLE II.   EE

ES	
How satisfied are you with your job? (ES1)	ES1
How would you rate the culture of your company? (ES2)	ES2
How likely would you leave for a 10% raise from another company? (ES3)	ES3
How likely are you to refer our company's products or services to a friend or colleague? (ES4)	ES4
What do you think of your customer service? (ES5)	ES5
How would you rank your manager's performance? (ES6)	ES6
How much room do you have for professional development in this company? (ES7)	ES7
How would you rank your co-workers and team members? (ES8)	ES8
How would you rate your organization's prior recognition efforts? (ES9)	ES9
How esteemed you feel at work? (ES10)	ES10

TABLE III.   ES

EC	
I am willing to invest in extraordinary arrangement of energy past that regularly expected to assist this association with being fruitful (EC1)	EC1
I feel almost no reliability in this organization (EC2)	EC2
To continue working for this organization, I would take practically any type of job assignment. (EC3)	EC3
I find that my values and the values of the organization are extremely comparable. (EC4)	EC4
I am delighted to say that I am a member of this organization. (EC5)	EC5
I am incredibly happy that I pick this association to work for over others I was considered at the time I joined (EC6)	EC6
I find it difficult to agree with this organization's ideology on major issues affecting its employees on a regular basis. (EC7)	EC7

TABLE IV.   EC

Data Analysis

The section below discusses the descriptive of the constructs in the research. Based on descriptive data, a structural equation model is proposed considering the impact of DEE on EE, ES and EC. Moreover, the impact of EE on ES and EC is studied. Lastly, association between ES and EC is found.

	N		$\bar{x}$	σ	Skewness	Std. Error of Skewness	Kurt	Std. Error of Kurtosis	Minimum	Maximum
	Valid	Missing								
JS	495	0	3.97	1.149	-1.395	0.11	1.353	0.219	1	5
FF	495	0	4.07	0.989	-1.245	0.11	1.216	0.219	1	5
CC	495	0	4.03	1.065	-1.461	0.11	1.803	0.219	1	5
HS	495	0	3.96	1.12	-1.441	0.11	1.595	0.219	1	5
Pay	495	0	4.03	1.14	-1.498	0.11	1.659	0.219	1	5
CB	495	0	4.03	1.122	-1.585	0.11	1.997	0.219	1	5

	N		$\underline{x}$	σ	Skewness	Std. Error of Skewness	Kurt	Std. Error of Kurtosis	Minimum	Maximum
	Valid	Missing								
EOFT	495	0	4.04	1.097	-1.472	0.11	1.711	0.219	1	5
Pay	495	0	4.01	1.147	-1.438	0.11	1.434	0.219	1	5
IMT	495	0	3.96	1.129	-1.514	0.11	1.77	0.219	1	5
DC	495	0	3.99	1.18	-1.439	0.11	1.37	0.219	1	5

TABLE V.   DEE

	N		$\underline{x}$	σ	Skewness	Std. Error of Skewness	Kurt	Std. Error of Kurtosis	Minimum	Maximum
	Valid	Missing								
EE1	495	0	4.1	1.116	-1.561	0.11	1.883	0.219	1	5
EE2	495	0	4.04	1.053	-1.359	0.11	1.503	0.219	1	5
EE3	495	0	3.98	1.098	-1.37	0.11	1.45	0.219	1	5
EE4	495	0	3.99	1.143	-1.444	0.11	1.519	0.219	1	5
EE5	495	0	4.02	1.113	-1.492	0.11	1.748	0.219	1	5
EE6	495	0	4.06	1.092	-1.426	0.11	1.55	0.219	1	5
EE7	495	0	4.02	1.1	-1.532	0.11	1.916	0.219	1	5
EE8	495	0	4.06	1.12	-1.542	0.11	1.83	0.219	1	5
EE9	495	0	4	1.133	-1.527	0.11	1.801	0.219	1	5

TABLE VI.   EE

	N		$\underline{x}$	σ	Skewness	Std. Error of Skewness	Kurt	Std. Error of Kurtosis	Minimum	Maximum
	Valid	Missing								
ES1	495	0	3.99	1.118	-1.482	0.11	1.716	0.219	1	5
ES2	495	0	4.03	1.027	-1.358	0.11	1.616	0.219	1	5
ES3	495	0	3.99	1.015	-1.263	0.11	1.388	0.219	1	5
ES4	495	0	3.91	1.093	-1.402	0.11	1.591	0.219	1	5
ES5	495	0	4.05	1.127	-1.487	0.11	1.683	0.219	1	5
ES6	495	0	3.99	1.105	-1.391	0.11	1.489	0.219	1	5
ES7	495	0	3.97	1.059	-1.403	0.11	1.685	0.219	1	5
ES8	495	0	4.1	1.098	-1.504	0.11	1.749	0.219	1	5
ES9	495	0	3.99	1.059	-1.496	0.11	2	0.219	1	5
ES10	495	0	3.98	1.123	-1.481	0.11	1.703	0.219	1	5

TABLE VII.   ES

	N		$\underline{x}$	σ	Skewness	Std. Error of Skewness	Kurt	Std. Error of Kurtosis	Minimum	Maximum
	Valid	Missing								
EC1	495	0	4.08	1.143	-1.467	0.11	1.519	0.219	1	5
EC2	495	0	4	1.016	-1.282	0.11	1.425	0.219	1	5
EC3	495	0	4.04	1.039	-1.386	0.11	1.675	0.219	1	5
EC4	495	0	4.02	1.15	-1.472	0.11	1.543	0.219	1	5
EC5	495	0	4.03	1.145	-1.453	0.11	1.529	0.219	1	5
EC6	495	0	3.93	1.132	-1.4	0.11	1.437	0.219	1	5
EC7	495	0	4.16	2.135	12.925	0.11	245.79	0.219	1	44

TABLE VIII.   EC

In marketing research, the second-generation multivariate data analysis technique known as structural equation modeling (SEM) is frequently employed since it allows for the testing of additive and linear causal models that are theoretically supported (Chin, 1996; Haenlein & Kaplan, 2004; Statsoft, 2013). To prioritize resources and better serve their clients, marketers can use SEM to graphically evaluate the links between relevant variables. SEM is perfect for solving business research issues since it may be utilized with unobservable, challenging ways to quantify hidden variables.
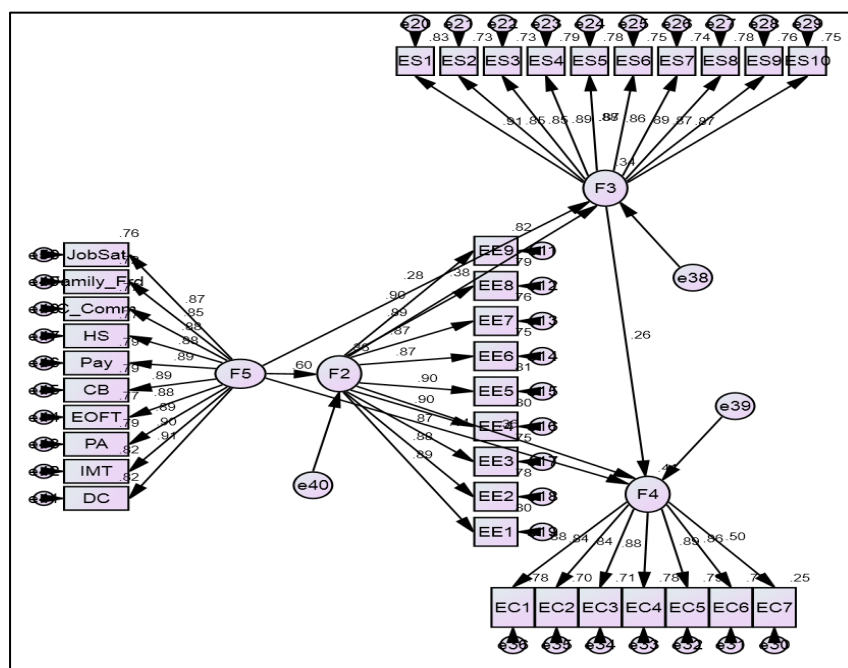
Fig. 2 SEM

Correlation Coefficient and path analysis:
The coefficient of determination measures the structural model's prediction accuracy by estimating the endogenous construct's total effect size and fluctuation. In this study, the inner route model for F2, F3, F4 and F5. R^2 of 0.75 is regarded as substantial, 0.50 is moderate, and 0.26 is weak. So, the R^2 was moderate in this case.

Endogenous variable	path	exogenous variable	regression coefficient (b)	Std Regression Weight (B)	SE	C.R.	P	Result
F2	<---	F5	0.559	0.599	0.039	14.428	***	Sig.
F3	<---	F2	0.385	0.377	0.051	7.629	***	Sig.
F3	<---	F5	0.262	0.275	0.046	5.643	***	Sig.
F4	<---	F2	0.384	0.357	0.062	6.186	***	Sig.
F4	<---	F3	0.273	0.259	0.053	5.14	***	Sig.
F4	<---	F5	0.144	0.143	0.05	2.89	0.004	Sig.

TABLE IX REGRESSION

Construct	correlation	Construct	r	r squared	AVG (AVE)
F2	<-->	F3	0.542	0.293764	0.774
F2	<-->	F4	0.583	0.339889	0.731
F2	<-->	F5	0.599	0.358801	0.781
F3	<-->	F4	0.524	0.274576	0.721
F3	<-->	F5	0.501	0.251001	0.771
F4	<-->	F5	0.487	0.237169	0.728

TABLE X PATH COFFICIE

Conclusion

THE RESEARCH DISCUSSED THE IMPACT OF DEE ON EE, ES AND EC. MOREOVER, IMPACT OF EE ON ES AND EC IS STUDIED. LASTLY, ASSOCIATION BETWEEN ES AND EC WAS FOUND.

As per the literature, the factors influencing DEE are mentioned in table I. They are the focal point of the study. It was found that, an organized and systematic EE practices can increase ES. Moreover, EE and recognition, directly increases commitment of employees towards work. There is a moderate association between ES and EC. Overall, it can be concluded that there is a positive impact of EE on ES and EC is studied.

The SEM model aids to link the constructs. The focal aim was to link and study impact of DEE(F5) with EE (F2), ES (F3) and EC (F4). The Path coefficients in table X clearly show moderate correlation between DEE, EE, ES and EC. R squared Value of F2 and F3 constructs is moderate and that of F4 is week.

Thus, the study concludes that DEE have a moderate impact of on EE, ES and EC

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A STUDY ON CRYPTOCURRENCY IN INDIA WITH SPECIAL RESPECT TO BITCOIN

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ABSTRACT
Bitcoin and other cryptocurrencies have become a popular topic in the financial sector. Cryptography is used for security in the creation of cryptocurrencies, which are digital, virtual, or online money.
With both positive and bad effects, cryptocurrency has brought about unparalleled changes in the financial market. Despite being easy to make use of, cryptocurrency's concept can be a little perplexing. It is thought to be difficult because of how drastically it departs from the conventional currencies that we have used for generations. During the global financial crisis of 2008, Bitcoin was developed in order to function independently of central banks, governments, and financial institutions. Since then, a number of regulators have struggled with Bitcoin's structure and have worked to find ways to control it. As a effect, some countries outlawed or outright prohibited it, while others chose to stay ignorant and develop means of taxing and regulating it. This conceptual paper aims to explore the many facets of cryptocurrencies, including their history, varieties, uses, benefits and drawbacks, difficulties, and opportunities. The study's goal is to evaluate Bitcoin's legal status in India.
Keywords: cryptocurrencies, types, Bitcoin, benefits, operations

Introduction

The exchange instruments used to support trade transactions have undergone considerable development and alteration in response to market demands. The tools used to enable the exchange of products are referred to as "money." Money, often known as currency, is a shop of value, a unit of account, and a way of conducting business. In the sense that we all agree to accept it while conducting transactions, money is a medium of exchange. Employees and business owners agree to accept money in trade for the goods and services they provide. In bookkeeping and accounting, value is easily identified and expressed using money as the unit of measure. Money functions as a shop of value since it enables us to preserve the earnings from our jobs or businesses in a convenient item. World currencies have changed significantly throughout the years, starting with barter, progressing through commodity money, metals and coins, gold and silver, contemporary monetary systems, and checks, and eventually the appearance of cryptocurrencies like Bitcoin and Ethereum. It was unthinkable a few years ago how severely the introduction of cryptocurrencies would alter the global payment system. A type of digital or virtual cash protected by encryption is known as a cryptocurrency. As a result, nobody could track the digital currency, including the bank that issued it or any other institution or government. Due to its security characteristics, a cryptocurrency is challenging to counterfeit. One of the aspects that sets a cryptocurrency apart from others is the lack of an issuing authority organization. There is no central control over it.

Literature Review

A sort of digital exchange known as cryptocurrency ensures the use of a strong encryption mechanism, which in turn limits the number of stocks (Luu2016). This is a relatively new phenomenon that has grown significantly in a volatile and shifting economic climate, while not being recognized as a formal form of debt cancellation (Ciaian, 2016). Cryptocurrencies are an unconventional kind of money since, despite being intended for this purpose, their decentralized nature prevents them from being utilized as a substitute for legal tender (Nakamoto 2008). Non- governmental organizations control the creation and upkeep of currencies, despite the fact that they are thought to be a viable option in the future (Kim 2015).

Virtual currencies first emerged as a form of digital trade that ensured their confidentiality, integrity, and balance because of a greater level of protection put in place by users. These people perform algorithms to help with security duties in exchange for cash (Alstyne 2014; Urquhart 2018) Or, to put it another way, the users who support and safeguard the underlying infrastructure by giving computer power are the ones who develop the security features of this payment system (Böhme2015).

According to Evans (2014), A shift in this assumption might lead the value of bitcoin and other digital currencies to vary even further. Their expectations for the future worth are reflected in the value of these assets at any

moment. According to the study, even if Bitcoin appears to be highly volatile in the short term, it will settle over time. The participants increase their knowledge of supply and demand as well as the value generated from using bitcoin, making them more efficient.

To understand what makes Bitcoin valuable or what causes its prices to fluctuate frequently, substantial academic research has been conducted. The most prevalent theory that determines the price of bitcoin in literature is the demand-supply theory. According to Blundell-Wignall, "inelastic demand and constrained supply" are to blame for the skyrocketing costs of Bitcoin (2014). The price determination methodology is used based on Bitcoin's role as a "medium of exchange." They contend that the advantages of using Bitcoin are what determine the supply and demand curves. However, if the government decides to eliminate these benefits, the coins are compromised by fraud, or a better alternative joins the market, the value might decrease to zero. The volume of transactions also demonstrates to be a key demand-driving component, indicating that the price increases are caused by users increased transactional needs. On the other hand, the supply-side factors show to have no impact on the pricing of this unrestrained modern money. According to Polasik (2015), the source of this phenomenon is that since a mathematical formula governs the bitcoin network, every projected future change has already been included into the existing values. Kristoufek (2015) does an analogous study using the wavelength coherent analysis approach and the creation of a demand variable as a trade exchange ratio. The study suggests that price drives the Trade exchange ratio in the near term but not over a longer duration. Therefore, increasing the number of non-exchange transactions will increase Bitcoin's value over the long term, while increasing exchange-based transactions in the short term due to price fluctuations. It is however difficult to distinguish the supply-side component since the future money supply is already taken into account in the current pricing according to a well-known process. There is very little correlation between the price of Bitcoin and the anticipated future supply (Polasik 2015).

Viglione (2015) uses the Economic Freedom Index to examine how governance and other relevant characteristics affect the price of Bitcoin, which is determined by users' willingness to pay more. This study shows how important it is for real interest rates, tax burdens, and investment flexibility to vary between nations when setting Bitcoin pricing. Inflation rates and the ease of transnational money exchange have no impact on the price of Bitcoin. Since Bitcoin is a digital currency, it needs to be examined from more than simply the standpoint of a regular currency. Ciaian and Rajcaniova examine both the conventional causes of currency values and elements unique to digital currency (2016).

The security of an electronic currency or the blockchain can theoretically be compromised, but depending on the algorithm and the formation process, doing so would be expensive. (Xu 2016; Khan and Salah 2018; Zhang . 2019).

As Bitcoin gains acceptability and appeal in the IoT (internet of things) age, it is attracting more attention. It is run on an unregulated system, making it incredibly vulnerable to manipulation. Gandal . (2018), as well as Griffin and Shams, have brought attention to this problem (2020).
Objective of the study
● To understand cryptocurrencies and its operations
● To study Bitcoin and its challenges.

Data Analysis
The role of a cryptocurrency as a medium of trade is its main objective. Online users can presently access more than 1600 cryptocurrencies, and this number is growing. whenever a brand-new cryptocurrency is created. By market capitalization, Bitcoin currently leads Ripple, Ethereum, and Litecoin as the largest blockchain network.

1. Bitcoin (BTC)
Bit coin is one of the most well-known cryptocurrencies and is generally acknowledged as the first. It is open-source software that was developed in 2009. Users are able to conduct open peer-to-peer transactions using the blockchain technology that underpins Bitcoin. These transactions, which are safe because of blockchain technology, are visible to all users. The transaction is visible to all users, but can only be decrypted by the owner of that particular Bitcoin using a "private key" that is supplied to each owner. Bitcoin has no centralized authority, unlike a bank. Global anonymous trading is made possible by the complete control that Bitcoin users have over the amount of money they transfer and receive.

2. Litecoin (LTC)
In order to compete with Bitcoin, Litecoin was released in October 2011. Litecoin is an open source software project and peer-to-peer cryptocurrency that is publicly accessible under the MIT/X11 license. Its generation and

transfer are totally decentralized and rely on open source encryption technologies.

Bitcoin and Litecoin are distinct from one another in some ways. Here are some examples of how various digital currencies differ from one another:

● In comparison to Bitcoin, the Litecoin network aspires to process a block every 2.5 minutes. The fact that this is the case suggests that Litecoin may confirm transactions more quickly. 84 million Litecoins and 21 million Bitcoins, in total, are in use today.

Experts assert that Litecoin is more expensive to produce and more challenging to produce because of its use of the unique Script algorithm and FPGA and ASIC (Application Specific Integrated Circuit) technology built for mining.

3. Ripple(XRP):The US-based startup Ripple Labs Incorporation invented Ripple, a network for real-time gross settlement, currency exchange, and remittances. Ripple, a cryptocurrency and digital payment network, was unveiled in 2012 and acts as a platform for business dealings. In order to make money transactions swift, safe, and economical, a global settlement network was established. The exchange of any money, including USD, Bitcoin, gold, and EUR, is made possible via Ripple's connections to banks. This distinguishes it from other types of money. By focusing on large-scale money transfers rather than one- on-one transactions, Ripple sets itself apart from other digital currencies.

4. Ethereum (ETH)

In late 2013, researcher and programmer Vitalik Buterin proposed the cryptocurrency Ethereum for the first time. In July 2015, it was initially made accessible. It is a platform that uses blockchain technology and is open source. Since the Ethereum blockchain focuses on running the computer code of any decentralized apps and on maintaining ownership of digital currency transactions, application developers can use it to pay for transaction fees and services on the Ethereum network.

5 .Bitcoin Cash

In order to improve some characteristics of Bitcoin, a brand-new cryptocurrency named Bitcoin Cash was created. In Bitcoin Cash, block sizes were increased, allowing for the quicker processing of more transactions.

6. Ethereum Classic

A variation of the Ethereum network is the blockchain known as Ethereum Classic. It uses a comparable decentralized infrastructure to manage smart contracts. Computer programmes called "smart contracts" operate exactly as intended with no chance of fraud, censorship, or outside meddling. It offers a value token called "conventional ether" that users may use to pay for products and services, much like Ethereum does.

Bitcoin

Bitcoin, the well-known cryptocurrency wallet, was created in 2008 by a person or group of persons going by the name Satoshi Nakamoto. Cryptocurrencies like bitcoin are a type of electronic money. On the peer-to-peer Bitcoin network, it is a type of decentralized electronic currency that may be transmitted directly between users without the need for a mediator. A public database called a blockchain, which manages user data anonymously, is used for transactions. Bitcoin has developed into the most well-known and widely accepted digital currency since its introduction ten years ago.

The term "cryptocurrency" is frequently used to refer to Bitcoin, even though Nakatamo himself describes it as "a mechanism for electronic transactions without relying on trust." For the transaction to be validated in other electronic payments, a trustworthy third party, such as a bank or other electronic device, is required. The Bitcoin system employs a massive number of competitive "miners" to authenticate transactions rather than depending on a single reliable middleman, like a bank or credit card network. To create and control currency, Bitcoin makes use of cryptographic principles. In comparison to Bitcoin transactions, traditional online payment options have greater transaction costs. Since they were designed to stand alone for their worth, bitcoins are wholly digital money. The bank does not need the moving or storing of money. There are no actual bitcoins stored in a public cloud wallet; only balances. A significant amount of computing power is needed to verify each and every Bitcoin transaction. A secret database that you may keep up on your computer, on your phone or tablet, or anywhere in the cloud is referred to as a "wallet." From one individual wallet to another, bitcoins are transferred.

Characteristics of Bitcoin

It takes more than just transmitting money from one person to another to use the Bitcoin system. It differs from other cryptocurrencies in a number of ways.

Control of fraud: In order to protect consumers against the vast majority of common scams, like chargebacks and

unauthorized charges, it gives the highest level of defense. The security of the wallets allows users to fully control their finances by encrypting them. This means that there is no chance of fraud of any type.

Bitcoin is accessible from any location in the globe, making it possible for any bank, company, or person to send and receive payments quickly and securely at any time. The ways of payment are unrestricted.

Cost-effective: Bitcoin allows for direct transactions without the need for an intermediary. The transaction time and cost are considerably less when compared to other payment systems.

Transparency: Users can see and follow all Bitcoin transactions. Every transactional detail is preserved on the block chain. a site that customers can access at any time.

Bitcoin's operation
Without the aid of a third party, such as a bank or financial institution, for the purpose of validation, individuals can use Bitcoins to pay other individuals or businesses. Instead, the system authenticates and clears transactions using the blockchain. Blockchain technology serves as the foundation for the majority of cryptocurrencies. To put it simply, it is a system for exchanging and storing the data or information created during bitcoin transactions. All Bitcoin transactions that have occurred inside the Bitcoin system are recorded and made publicly available on the blockchain, a public ledger. A block is a running list of recently completed transactions. The blockchain, which goes back to the initial Bitcoin transaction, is made up of blocks of stored data that stack on top of one another. The security of the validation process, which enables the community to monitor and self-regulate transaction activity, is a prerequisite for the openness that the blockchain offers. Additionally, it makes it simple to authenticate the sender and receiver and prevents bitcoin double spending.

The public key and the private key are provided to the user when they create a Bitcoin wallet to keep their bitcoin. Similar to his or her login and password, public keys and private keys are two sets of very large numbers and letters. If someone wants to send them money, they need to have access to their public key. No one needs to know their name or email because it is just a collection of numbers and statistics, address or other details that can be used to identify a person. As a consequence, Bitcoin users maintain their anonymity. However, the private key is not disclosed. A person's private key serves as their unique identifier on the blockchain. To access Bitcoin, a private key is required. Every Bitcoin in the wallet or account might be stolen if someone witnesses.

Bitcoin's legality in India
Bitcoin's and other related crypto-related instruments' legal status is still up in the air or fluctuating in several of these countries. The majority of countries do not specifically prohibit the use of Bitcoin, but different regulatory consequences apply depending on whether it is regarded as money or a commodity. In certain states, its use and commerce are explicitly allowed, whilst in others, it is not allowed or is subject to limitations. Similar to how different categories have been given to Bitcoins by several government departments, agencies, and courts. The conversion of fiat cash (conventional currency) to bitcoin, however, is said to be subject to VAT/GST. Regarding Bitcoin's position as a currency, the European Union has not established any formal regulations. Bitcoin use is permitted in the following countries: Ireland, France, the United States, Russia, Japan, Singapore, Switzerland, Germany, Norway, Costa Rica, South Africa, Kyrgyzstan, Jamaica, Netherlands, Luxemburg, Belgium, Spain, Herzegovina, Portugal, Marcedonia, Malta, Lithnania, Italy, Greece, Bulgaria Sweden, Bosnia, Denmark, Finland, Iceland, Lebanon, Ukraine, Mexico, Namibia, Rica, Uzbekistan, Costa, Venezuela, Turkey, the Czech Republic, Turkey, Hong Kong, Lebanon, Israel, Chile, Philippines, Brazil, Argentina and Venezuela.

A number of countries, including, China, Nepal, Taiwan, Pakistan ,Cambodia, , Bangladesh, Iran, Saudi Arabia, Indonesia Colombia, , Bolivia, Ecuador, Morocco, Algeria and Egypt, have outright banned Bitcoin and transactions based on it.

Bitcoin is legal in India, Canada, Jordan, Vietnam, and Thailand while being outlawed in banking. Although the State Bank of Vietnam has stated that the issuance, supply, and use of Bitcoin and other comparable virtual currencies is forbidden as a method of payment and is subject to fines of between 150 million and 200 million Vietnamese Dong (VND), the government has not passed any legislation that forbids the exchange of Bitcoin for other virtual goods or assets. Bitcoins became available in India in 2012. Arun Jaitley, the finance minister, pledged to restrict the use of Bitcoin and other virtual currencies in India for illicit purposes in his budget presentation on February 1, 2018. He emphasized that India will support blockchain technology in payment systems rather than accepting them as legal cash. The Indian government advises users of these forms of currencies to exercise caution because there is no legal protection for them. And if the public encounters fraud, the government cannot assist the public in any way. In the early months of 2018, the Reserve Bank of India

(RBI) placed a ban on the purchase and selling of crypto currencies for organizations under RBI control.

A petition contesting the legitimacy of cryptocurrencies and asking for a directive or order preventing their transaction was submitted to the Supreme Court of India in 2019. The regulatory framework for cryptocurrencies is being developed by the Indian government. The Supreme Court handed thegovernment four weeks to develop cryptocurrency regulation on February 25. The court will then consider the petitions challenging the RBI's ban on crypto currency banking.

In India, bitcoin is entirely legal as of April 2022, there are no clear laws or regulations to regulate Bitcoin, but the Indian government has enacted a crypto tax at a flat rate of 30% on gains from the transfer of cryptocurrencies. The legality of Bitcoin and other cryptos hasn't yet been debated, despite the tax implications. This does not preclude you from engaging in legitimate cryptocurrency trading, though. The union budget outcomes are

1. A 30% tax rate will apply to income from the transfer of virtual digital assets like cryptocurrency and NFTs.
2. When declaring revenue from the transfer of digital assets, there will be no deductions permitted besides the cost of purchase.
3. Digital asset losses cannot be offset by any other revenue.
4. Giving away digital assets will subject the recipient to tax.It is not possible to offset losses from one virtual digital currency against gains from another.

Benefits of Bitcoin

1. The advantages and disadvantages of Bitcoin are listed below by Ivaschenko (2016). Anonymity comes first. The applicants must provide their ID while requesting an account with a bank. Using Bitcoin, anyone can send money to anyone else in the globe. To open a Bitcoin wallet, no KYC (Know Your Customer) procedure is necessary. It is fully anonymous and totally transparent. Without using the names, addresses, or any other sensitive information of its customers, any business may generate a limitless number of Bitcoin addresses.

2. In a peer-to-peer bitcoin network, nothing is managed by a single central server. In this case, there is an information (or monetary) exchange taking on between two to three software clients. The Bitcoin network includes all application wallets that users have installed. All committed transactions and the total quantity of Bitcoins in each wallet are stored in the client's database. Many dispersed servers handle hundreds of transactions. The movement of money cannot be controlled by governments, banks, or taxes.

3. As there are only 21 million Bitcoins in existence, there is no inflation. There is no opportunity for inflation to arise in the system since neither political forces nor companies are able to alter this setup.

4. Using the same algorithms as online banking, open source cryptocurrency mining employs BTC. The sharing of user data is the sole distinction between Internet banking and conventional banking. All transaction-related data (how, when) is communicated through the BTC network, but neither the sender nor the recipient of the coins are known (the owner's wallet is therefore inaccessible).Unlimited transaction options - The owner of a wallet has unlimited transaction options, enabling them to transfer money to anybody, anywhere, for any amount. You may transfer money to anybody, anywhere in the world, who has a Bitcoin wallet since a Bitcoin transaction cannot be stopped or controlled.

5. No restrictions. Making payments via this manner is final. It is impossible to duplicate, forge, or use the coins more than once. The integrity of the entire system is safeguarded by these skills. More and more online vendors, suppliers, and businesses are now accepting Bitcoin each month.

6. Low operating costs for Bitcoin: Real money and online purchasing power can coexist with the help of the BTC cryptocurrency. Banks or other companies are not entitled to receive commissions or other fees. The primary, free element of this procedure is math. This method provides a lower commission fee as compared to other systems. It amounts to 0.1% of the whole transaction value. Transaction fees are sent to the wallets of bitcoin miners.

7. Decentralization Each computer mining : This network, which includes Bitcoins, is managed by all of its users rather than by a single entity. This suggests that the central authority lacks the power to enforce regulations on Bitcoin users. Additionally, the payment mechanism will continue to work reliably even if some of the network is down.

8.   Easy to use. Businesses can gain from utilizing BTC since it might be challenging to open a corporate

account in Ukrainian banks and there is a potential that it will be rejected without warning. The business may create a BTC wallet in around 5 minutes, after which it can be utilized right away without any charges or wait times.

9. Openness: The BTC maintains a history of every prior transaction. A blockchain is a collection of related blocks that are arranged sequentially. All of the data is included in the block chain. Anyone can learn how much Bitcoin is held if the company has made the BTC address public. If the location is kept a secret, no one will ever know that this company even has a physical address. Businesses frequently use a different BTC address for each transaction to retain the highest level of privacy.

10. Transaction speed: After a payment has been accepted by the BTC network, the capacity to transmit money instantaneously to anybody, anywhere.Sending an international payment through our bank often takes three days or more. If we transmit it using Bitcoin, it will only take a little more than 10 minutes. This is still much quicker than the banks' 3+ day turnaround times, even though it can occasionally take longer (up to an hour or more).

Drawbacks of Bitcoin

1. No Bitcoin transaction may be undone. The financial institutions that accept checks, credit card charges, bank drafts, wire transfers, and other conventional payment methods profit by being insured and reversible. Every time bitcoins are transferred between users and wallets, the outcome is already known. Your Bitcoin wallet is not additionally covered by insurance. If you misplace your wallet's password or even the hard drive information, the contents of your wallet are permanently lost.

2. Unable to be Confiscated, Frozen, or Audited: Banks and law enforcement are unable to seize, freeze, or audit bitcoin wallets. Bitcoin wallets cannot be restricted in terms of deposits or withdrawals. Wealth management decisions are made only by the owner of the Bitcoin wallet.

3. It's not easy to use Bitcoin: Private key, public key, accessing and using a wallet, etc., are not very straightforward ideas for folks who are unconfident with computers. Every time we want to send someone money, we have to enter a long string of characters into the computer (their public key). Bitcoin needs to be as easy to use as internet browsing in order to be available to everyone worldwide.

4. Delay in confirmation due to technical issues: It is occasionally feasible to spend bitcoins twice during the confirmation period. Bitcoin transactions are peer-to-peer, thus it takes a while for the P2P network of computers to confirm them. A dishonest user who clicks rapidly during these brief pauses might send a second payment of the same Bitcoins to a different recipient. The payment and the items are lost if the second receiver delivers the goods to the dishonest buyer before receiving confirmation of the dishonest transaction, even though the system finally recognises the double-spending and invalidates the dishonest second transaction.

Bitcoin (Btc) Opportunities In India

Businesspeople there believe this creates a natural opportunity for the country to adopt Bitcoin and other cryptocurrencies. The number of Bitcoin owners in India is now estimated to be around 30,000, and this number is expected to increase.

- Customers using the payment method are not required to submit their secret passwords.

- For emigrants, it provides a tool for sending remittances without incurring fees. • For marketers, it is a technique to reduce transaction costs.

Btc Difficulties In India

Government Regulation: The attitude of the Indian government is the main barrier preventing Bitcoin from taking off in India. Currently, it's unclear how cryptocurrencies will develop in India. The RBI announced in 2019 that cryptocurrencies would not be recognized as legal cash. largely as a result of its complete decentralization

Security Risk: Malicious people and hackers will be able to make as much virtual money as they desire if they are successful in getting past the system's defenses and learning how to create it. As a result, it will be simple to produce fake virtual currency or steal virtual money by simply changing account balances.

Crypto currencies like Bitcoin, which allow users to buy both virtual and real products and services using virtual currency on some platforms, may have a negative impact on the Indian monetary system by reducing the need

for physical cash. Users will transition from paying for their purchases with real money to utilizing virtual money. The price of real money will increase as a result of some platforms users' ability to exchange their virtual currency for it. This change in supply and demand will have a negative influence on the real monetary systems. Utilizing for Alleged Operations: A number of incidences have led to claims that Bitcoin has been used for nefarious and criminal operations throughout the world, including tax evasion, black marketing, and money laundering.

No Ombudsman: As there is no venue where a user may conceivably go for assistance or to air a complaint, consumers are subject to transactional and informational risks.

Deep economic integration of local currency: According to Paul Brody, global innovation leader at EY, Bitcoin and other cryptocurrencies have no real-world use in the country because of how pervasively used local currency is.

Human error in online transactions: Unregulated internet exchanges that exchange money for bitcoins may be run by dishonest or inexperienced individuals. The fundamental contrast is that while user insurance is not offered by Bitcoin exchanges, bank clients are partially insured for losses through traditional banking.

Conclusion & Finding

Bitcoin provides a cutting-edge, advantageous, and appealing payment mechanism that can increase revenue for both enterprises and operators. It makes it easier for consumers to complete financial activities including purchasing, selling, transferring, and exchanging by providing alternatives to traditional payment methods. More advantages of cryptocurrencies can be found in the e-business and e-payment sectors. The trust in cryptocurrency is currently low, nevertheless. There are several issues, concerns, and problems with many cryptocurrency systems. Until cryptocurrencies are properly controlled and maintained, users must use them with great caution. The absence of laws is thus the primary problem with cryptocurrency systems. To increase India's credibility and win the trust of the populace, more laws should be upheld and enforced.

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A STUDY ON CUSTOMERS PERCEPTION ABOUT SIGNIFICANCE OF DIGITAL SECURITY

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ABSTRACT

In recent years, digital threats have posed significant risk to organizations and individuals. Unfortunately, many people in the public and private sectors still lack the advanced knowledge required to understand how digital threats work and the risk they pose. This study is done to know the customers perception about the significance of digital security in an important scenario. The study is based on a survey of 223 individuals in Pune city, Maharashtra, India who use internet/ mobile banking. The results of the study indicate that the difference of the perception regarding the importance of digital security between male and female is not statistically significant, male and female both show higher levels of importance towards security. The study reveals that there is a significant difference in the level of importance regarding digital security with the income groups. The study also shows that there are no significant differences in regard with the age groups.

Keywords: digital security, customer perception, risk, online banking

Introduction

In the past decade, there has been an exponential growth in information technology and e-commerce development and future applications for IT/e-commerce could not be predicted. As a result, the security of e-commerce networks is becoming an increasing concern for organizations, because of various cyberattacks including denial of service (DoS), virus, spam and email scams.

There are more than 8 billion dollars lost per year by the organizations due to digital security attacks (Thompson, 2019). Considering that 10% of these losses come from international e-commerce companies, it can be said that these losses are increasing worldwide with each passing day. This perspective on the importance of digital security shows an alarming increase in the level of concern. The purpose of this study is to identify the level of concern of customers regarding digital security in their daily activities.

In recent years, digital threats have posed significant risk to organizations and individuals. Unfortunately, many people in the public and private sectors still lack the advanced knowledge required to understand how digital threats work and the risk they pose. It is evident that there is an urgent need for information security training for employees at all organizational levels. In the face of increasing risks in our digital world, digital security has emerged as a new form of national security that needs to be safeguarded and managed.

Types of digital frauds:
1. Carding: In this type of fraud there are two types:
a) Carding is the act of obtaining sensitive data through accessing the systems of another organization without being authorized.
b) Carding is transferring funds from one account to another using stolen or expired credit cards.

2. Spam scam: In this type of fraud, an email message purporting to be from a legitimate sender is sent to users indiscriminately via multiple computers and often receives large quantities of replies from users, flooding the recipient with unwanted material.

3. Phishing: This type of fraud is when an entity creates a website and uses fake or stolen emails to convince the users to disclose their confidential information.

4. Pharming (Spoofing): In this type of fraud, fraudulent and unauthorized IP addresses are used by hackers to gain unauthorized access to a server or network with the aim of collecting sensitive data.

5. Viruses and Trojans: This type of fraud replicates a legitimate program and intercept user or system data leading to the compromise of the network.

To protect against cybercriminals, organizations need to guarantee the security of their systems, use strong authentication and encryption techniques, employ a layered security model, implement password management techniques, educate users about threats and frauds, employ intelligent monitoring tools to detect changes in IT networks.

The aim of this study is to identify the level of concern regarding digital security in daily activities by male and female participants – whether there is any difference between the two in concerns. Also analyse how income groups are affected with respect to digital security precautions.

Literature review

There are literatures about the research. Raghu, Josephine, Abbamanya and Ananthanarayan (2014) conducted a survey to find out the awareness of detecting cyber threats and the awareness of knowledge sharing in educational institutions among instructional staff members at two private universities in Chennai. The survey was conducted on 100 staff members from two private universities in Chennai. The results revealed that there are opportunities for improvement in the awareness of cyber threats. The results also highlight that there is an urgent need for the instructional staff to educate students on cyber security matters.

Sharma and Jharna (2014) conducted research in order to explore the perception of government and private organizations regarding the importance of digital security. Using survey technique 100 from government organizations, 100 from private organizations were selected randomly and a survey was conducted among them. This study shows that most of the participants are unaware about digital security practices and their perception toward it is not positive. Further, the study shows that steps should be taken to educate the public about digital security.

The results of this survey indicate that there is an urgent need for an improved awareness on digital security. Further, it is reported that there are 50% of individuals who are unaware about their own financial transactions. There is 74% ignorance among users regarding digital security in general and 68% regarding online banking (Kanade, 2014).

Kumar and Dixit (2015) conducted a study to identify the level of digital security awareness among bank employees and customer satisfaction towards it in Pune city. The study found that total 41% of the customers are unaware about digital security whereas 58% of them are aware about it. The study also found that 85% of the bank employees are aware of digital security. The study recommends that steps should be taken to educate customers and employees regarding digital security.

Kapoor (2019) conducted research to explore the awareness towards digital security among e-commerce users in India. The survey was conducted among 250 consumers. The results of the study reveal that only 37% of the consumers are unaware about digital security whereas 63% of them are aware about it. This study also found that there is a need for improvement in the awareness and practices regarding digital security among e-commerce users.

Miller (2021) conducted a survey to find out the level of security awareness among 31-year-old and 62 year old middle class Indians regarding digital frauds. The survey was conducted among 540 respondents from middle class households in India. The results revealed that more than half of the respondents are unaware about digital security. It further states that more than 45% of the respondents have less knowledge about digital security. This study also shows that there is a need for effective awareness programs regarding cyber threats for these consumers (Sharma, 2014).

Mishra (2022) conducted a survey to find out the level of security awareness among e-commerce customers regarding digital frauds in India. The survey was conducted among 200 online customers in India. The study shows that 75% of the respondents are unaware about digital security. This study also found that 45% of the consumers are aware about digital security but there is a need for improvement in their awareness and practices regarding cyber threats.

Singh (2021) conducted research to find out the level of information sharing on cyber security among employees at Indian companies. The research revealed that there is a need for effective cyber security information sharing policies and education on cyber security issues at corporate level. Digital security techniques guarantee security against cyber threats. The techniques can be classified into four categories as follows:

a. Authentication: This type of security ensures that the identity of the user matches with the identity that is being electronically transmitted.

b. Encryption: This type of security protects data against unauthorized access. It uses advanced encryption algorithms to ensure its secrecy.

c. Access control: This type of security keeps unauthorized users out by maintaining strict rules in access control and monitoring internal networks (Sharma, 2014).

d. Malicious code detection and prevention: This type of security measures can be used to detect and prevent malicious code from getting into the networks which are being attacked (Singh, 2021).

The findings reveal that there is a need for effective cyber security awareness programs among employees at corporate levels. There are also different types of cyber threats for different types of organizations and industries. Some of them are mentioned below:

a. Government attacks: Government attacks are most dangerous as they can penetrate government networks and steal sensitive information to harm the system. For example, an attack on a bank could be carried out by breaking into the computers of online access control, stealing passwords and emails to spy on private information.

b. Attackers: These attackers are dangerous as they may not have malicious intentions. They may steal information or track people who have stolen credit card numbers and other sensitive data to sell it further to hackers for huge profits.

c. Hackers: This is a group of individuals who are responsible for a cyber-attack against some organization or industry by either breaking into the system or gaining unauthorized entry into the system (Chauhan, 2021).

d. Spammers: These are individuals who send mass emails or messages to users to promote their products. They may also install malicious software on the computers of users.

The study reported that there is an urgent need for development of effective cyber security awareness programs among the above-mentioned categories of individuals and groups.

Vaishnav (2018) conducted research to find out the level of cyber fraud awareness among Indian teenagers. The study found that due to increased digitalization, there is an alarming increase in cyber frauds. This study also found that there is a need for effective awareness programs on cybersecurity among teenagers.

Digital security involves the procedures and measures that are taken to secure computer systems from unauthorized access or malicious attacks from hackers and other types of cyber criminals. It is a broad term that encompasses many aspects ranging from information security over network security to physical security (Stephens, 2014).

There are various techniques that can be used to ensure digital security:

a. Authentication: This type of security ensures that the identity of the user matches with the identity that is being electronically transmitted. Examples of authentication techniques include logins, passwords, and email addresses (Henderson, 2012).

b. Web-based authentication: This type of security is widely used by many organizations and industries to authenticate users or customers. Web-based authentication involves use of unique codes or passwords which are sent to users through emails which they need to enter to access some information or applications (Salama & Salama, 2014).

c. Encryption: This type of security protects data against unauthorized access. It uses advanced encryption algorithms to ensure its secrecy. Encryption works on the principle of converting information into an unintelligible form. This form is known as a cipher and only the intended recipient can convert it back into readable form. To encrypt data, it needs to be first broken into a string of comma-separated numbers (Wang, 2018).

d. Access control: This type of security keeps unauthorized users out by maintaining strict rules in access control and monitoring internal networks (Henderson, 2012).

e. Detection and prevention: This technique can be used to detect and prevent malicious code from getting into the networks that are being attacked (Riesing, 2019).

The word cyber security is derived from the words "cybernetics", "computer" and "security". Cybernetics refers to a branch of science that involves the control of information and communications systems using feedback (Borchardt, 2017). This type of security also involves proper analysis and management of communication media. The development of computers and computer networks has led to a new era in cyber security. Computers have been heavily used in all kinds of activities including different types of applications such as health care, education, banking, military, business management and communications.

There are mainly three types of devices known as computers: desktops, laptops and embedded systems. Desktop computers are used in offices and other areas where users need to perform many tasks. Laptops are small portable computers that are used for traveling, writing papers and other types of applications. Embedded system is a type of computer that is found in cars, planes and various mechanical devices like motor vehicles, air conditioners, washing machines and refrigerators etc.

Objectives of the study
1. To understand the importance of digital security
2. To study customers perception about the significance of digital security
3. To determine the differences in the perception regarding the importance of digital security with gender, age, and income.

Hypotheses
H1: There is no difference in perception regarding the importance of digital security between the genders.

H2: There is no difference of perception regarding the importance of digital security among different age groups.

H3: There is no significant difference in the level of importance regarding digital security within the income groups.

Research methodology
This research was conducted using a quantitative survey method. A total of 223 customers from Pune city were surveyed, who use internet/ mobile banking service. The questionnaire contained a combination of open-ended and closed-ended questions on the topic of digital security.

Cross-sectional design: This study was done using a cross-sectional survey design. This allowed the researchers to collect data from all participants in one point of time, thus reducing cost and time associated with conducting multiple surveys.

Approach: The research approach adopted for this study was a quantitative survey.

Sampling: The population of this study were people from Pune city who use internet/ mobile banking services. A convenience sampling technique was used to select the participants.
Data Analysis: Statistical software SPSS version 24 was used to analyse the data collected through questionnaires.

Data Collection: The survey questionnaire was administered in both online and on-paper forms. in cases where face to face interaction could not be used, the data has been collected online or through telephonic interviews.
Use of Likert Scales: The survey questionnaire included several Likert scales that allowed participants to express their opinion on a range of topics including their perception about digital security.

Data Analysis

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	18-30 years	9	4.0	4.0	4.0
	31-40 years	53	23.8	23.8	27.8
	41-50 years	119	53.4	53.4	81.2
	51-60 years	33	14.8	14.8	96.0
	Above 60 years	9	4.0	4.0	100.0
	Total	223	100.0	100.0	

Table no 1. Age of respondents.

From the above table the majority of the respondents (53.4%) were in the age group of 41-50 years, followed by 23.8% who were in the 31-40 years age group and 14.8% who were in the 51-60 years age group. Only 4% of the respondents belonged to both 18-30 years as well as above 60 years age group. This means that the majority of the respondents belonged to the middle age group, which could be due to many factors such as level of education and job responsibilities.

It is also interesting to note that almost half (46.2%) of the respondents were aged between 31-50 years and that only 8% of them were either below or above this age range. This could be due to the fact that many people in this age group have more disposable income and are more likely to purchase certain items, which might explain why they are over-represented in the survey.

Overall, it can be concluded that the majority of respondents were in the middle age group, which could indicate that the target market for certain products might be within this age range. It is also noteworthy that a small number of respondents belonged to either the 18-30 years or above 60 years age group, which could suggest that these age groups may not be as interested in purchasing such items as those in the middle age group. This information can be very helpful in designing marketing strategies and targeting the right consumers.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	113	50.7	50.7	50.7
	Female	110	49.3	49.3	100.0
	Total	223	100.0	100.0	

Table no 2. Gender of respondents.

From the above table the majority of respondents (50.7%) were male, while 49.3% were female. This suggests that both genders are equally represented in this survey, which could indicate that certain products or services could be marketed to both males and females.

It is also noteworthy that the percentage of males was slightly higher than that of females, which could be due to many factors such as cultural norms and preferences. For example, it is possible that males are more likely to purchase certain items than females, which may explain why they have a higher representation in the survey.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Business	45	20.2	20.2	20.2
	Salaried Employee	78	35.0	35.0	55.2
	Homemaker	88	39.5	39.5	94.6
	Other	12	5.4	5.4	100.0
	Total	223	100.0	100.0	

Table no 3. Occupation of respondents.

From the above table the majority of respondents (39.5%) were homemakers, followed by 35% who were salaried employees and 20.2% who were businessmen or entrepreneurs. Only 5.4% belonged to other occupations such as students, retired persons etc.

This suggests that most people surveyed belong to traditional occupations such as salaried employees and homemakers, which could indicate that certain products or services may be more relevant to these kinds of occupations. It is also noteworthy that the percentage of businessmen or entrepreneurs in the survey was

relatively low (20.2%) compared to salaried employees (35%). This could mean that there are not many people with disposable incomes in the survey, which can be a factor when it comes to marketing certain items.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0-1 lakh	12	5.4	5.4	5.4
	1-5 lakhs	31	13.9	13.9	19.3
	5-10 lakhs	138	61.9	61.9	81.2
	10-20 lakhs	29	13.0	13.0	94.2
	Above 20 lakhs	13	5.8	5.8	100.0
	Total	223	100.0	100.0	

Table no 4. Income of respondents

The above table shows that most respondents (61.9%) belonged to the 5-10 lakhs per annum income group, while only 13.9% belonged to the 1-5 lakhs and 13% to 10-20 lakhs income groups. Additionally, only 5.4% and 5.8% belonged to either 0-1 or above 20 lakhs per annum income groups respectively.

This indicates that most people in the survey belonged to the middle-income group, which could mean that certain products or services may be more relevant for them as compared to those belonging to higher or lower income groups. It is also noteworthy that a small percentage of respondents belonged to either the 0-1 or above 20 lakhs per annum income groups, which could suggest that these groups may not be as interested in purchasing certain items.

	Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree	
	Count	Row N %	Count	Row N %	Count	Row N %	Count	Row N %	Count	Row N %
1. I understand the importance of cyber security	8	3.6%	10	4.5%	12	5.4%	88	39.5%	105	47.1%
2. I take necessary measures to protect my data online	12	5.4%	23	10.3%	11	4.9%	83	37.2%	94	42.2%
3. I am aware of the various types of cyber threats such as phishing, malware, etc.	18	8.1%	26	11.7%	32	14.3%	75	33.6%	72	32.3%
4. I regularly update my software programs and devices to ensure protection from cyber threats	16	7.2%	19	8.5%	8	3.6%	84	37.7%	96	43.0%
5. I use strong passwords for all my accounts and regularly change them	65	29.1%	25	11.2%	7	3.1%	66	29.6%	60	26.9%
6. I know about secure payment methods and only use them when making payments online	21	9.4%	15	6.7%	6	2.7%	91	40.8%	90	40.4%
7. I use two-factor authentication for all accounts that support this feature	6	2.7%	7	3.1%	7	3.1%	89	39.9%	114	51.1%
8. I always check if a website is verified before entering any personal information on it	12	5.4%	15	6.7%	9	4.0%	98	43.9%	89	39.9%
9. I use Virtual Private Networks (VPNs) whenever possible to protect my data	84	37.7%	56	25.1%	23	10.3%	31	13.9%	29	13.0%

10. I am careful of malicious links or attachments in emails or messages and do not open them unless necessary	21	9.4%	9	4.0%	10	4.5%	98	43.9%	85	38.1%

Table no 5. Importance given to cyber security.

From the above table most of the respondents (over 40%) agreed or strongly agreed that they understand the importance of cyber security, take necessary measures to protect their data online, and are aware of various types of cyber threats. Similarly, more than half of the respondents agreed or strongly agreed that they regularly update their software programs and devices to ensure protection from cyber threats.

On the other hand, more than a quarter of respondents agreed or strongly agreed that they use strong passwords for all their accounts and regularly change them. Furthermore, a similar proportion of respondents also agreed or strongly agreed that they know about secure payment methods and only use them when making payments online. Lastly, slightly over half of the respondents agreed or strongly agreed that they use two-factor authentication for all accounts that support this feature and are careful of malicious links or attachments in emails or messages.

Overall, the survey results suggest that most respondents have taken measures to protect their data online and understand the importance of cyber security. Nevertheless, there is still scope for improvement as certain proportions of respondents still had low levels of agreement with certain questions. Therefore, it is important for organizations to ensure that their employees are adequately educated on cyber security and take necessary steps to protect their data online.

This survey was also useful in understanding the level of cyber security awareness among people belonging to different income groups. It was observed that most respondents belonging to the 0-1 income group were generally less likely to agree or strongly agree with most of the survey questions as compared to people belonging to higher income groups. This indicates that it may be beneficial for organizations to focus on targeting people in lower income groups and educating them on cyber security measures they can take to protect their data online.

Overall, this survey was useful in understanding the cyber security awareness among different groups of people and has highlighted certain areas where organizations should consider focusing their efforts for improving cyber security.   It is hoped that this survey will be helpful in guiding future initiatives related to cyber security education and creating awareness around various threats associated with online activities.

Testing of Hypothesis

	Gender	N	Mean	Std. Deviation	Std. Error Mean
Average (Level of Importance given to Cyber Security)	Male	113	3.8212	.52209	.04911
	Female	110	3.7382	.60350	.05754

Table no 6. Group Statistics.

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% CI Lower	Upper
Average (Level of Importance given to Cyber Security)	Equal variances assumed	.923	.338	1.100	221	.273	.08306	.07551	-.06575	.23186
	Equal variances not assumed			1.098	214.747	.273	.08306	.07565	-.06606	.23217

Table no 7. Independent Samples Test.

The above tables show that the difference in the means of both the genders are not significant. With this we can safely accept the null hypothesis that the means are equal which also means that there is no difference in perception regarding the importance of digital security between the genders.

Average (Level of Importance given to Cyber Security)								
			Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
	N	Mean			Lower Bound	Upper Bound		
18-30 years	9	3.6333	.65192	.21731	3.1322	4.1344	2.40	4.30
31-40 years	53	3.6887	.67700	.09299	3.5021	3.8753	1.80	4.60
41-50 years	119	3.7983	.54726	.05017	3.6990	3.8977	1.90	4.60
51-60 years	33	3.8333	.41883	.07291	3.6848	3.9818	2.50	4.50
Above 60 years	9	4.0333	.36742	.12247	3.7509	4.3158	3.60	4.70
Total	223	3.7803	.56398	.03777	3.7058	3.8547	1.80	4.70

Table no 8. Descriptive.

Average (Level of Importance given to Cyber Security)					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1.347	4	.337	1.060	.377
Within Groups	69.266	218	.318		
Total	70.613	222			

Table no 9. ANOVA.

The above tables show that the p value is greater than 0.05. With this we accept the null hypothesis that there is no difference of perception regarding the importance of digital security among different age groups.

Average (Level of Importance given to Cyber Security)								
			Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
	N	Mean			Lower Bound	Upper Bound		
0-1 lakh	12	3.2250	.40704	.11750	2.9664	3.4836	2.50	3.70
1-5 lakhs	31	3.5677	.58217	.10456	3.3542	3.7813	1.90	4.40
5-10 lakhs	138	3.9870	.42749	.03639	3.9150	4.0589	2.20	4.70
10-20 lakhs	29	3.5069	.67238	.12486	3.2511	3.7627	1.80	4.40
Above 20 lakhs	13	3.2154	.54901	.15227	2.8836	3.5471	2.30	4.00

Total	223	3.7803	.56398	.03777	3.7058	3.8547	1.80	4.70

Table no 10. Descriptive.

Average (Level of Importance given to Cyber Security)

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	17.311	4	4.328	17.700	.000
Within Groups	53.302	218	.245		
Total	70.613	222			

Table no 8. ANOVA.

The p value is less than 0.05. With this we can safely reject the null hypothesis that there is no significant difference in the level of importance regarding digital security within the income groups. For the individuals who have an income between 5-10 lakhs, the mean is 3.9 as compared to the people who have an income between 0-1 lakh (mean = 3.2).

Conclusion

Based on the data and analysis provided, it can be concluded that there is a significant difference in perception regarding the importance of digital security among different income groups. Individuals with higher incomes appear to rate digital security as more important than those with lower incomes. This emphasizes the need for adequate educational measures to ensure that all individuals, irrespective of their economic status, are aware of the importance of digital security and its implications. This research provides useful insights into how digital security is viewed by different sections of our society and could be used as guidance for policy makers when designing policies related to digital security. It is essential to recognize the importance of digital security to ensure that our societies remain safe and secure. Therefore, further studies should be conducted to explore the different aspects and implications of digital security in our ever-evolving digital world. This will help us build a better understanding of this important issue and provide guidance for policy makers to design effective policies that promote digital security within our society.

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A STUDY ON INDIAN PENAL CODE - A MODERN APPROACH THROUGH E-LEARNING

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ABSTRACT

The law develops and extends its dimension in various ways for the protection of right, but unlike the western countries, the issues of marital rape does not attract the attention of the law-makers for a long time, even though there are a number of debates on the topic in general. There are 36 countries in the world where marital rape is not a crime, like China, Pakistan etc. India's penal laws originated from the British laws due to colonization. However, in R v R case, pertaining to United Kingdom, the judge observed that for a husband to rape his wife is a crime. However, the husband's argument was that marriage gave him irrevocable consent; even though the court did not accept this argument and punished him. It was the observation of the court that for punishing a person the relationship of the concerned is not important. As far as India is concerned the rules are not so clear. Even in the case of Arnesh M Kumar v State of Bihar, the Supreme Court has observed that considering marital rape as a crime would be an utter failure of the systems of society and family set up. Not only this case, but multiple cases have also been filed to criminalize the marital rape, but till today the law allows the married women for rape if she is over the age of 18 years. It is a high time to treat women with dignity by protecting their body. It is the observation of AmitaPitre, at Oxfam India, "In India rape is not seen as an injury to a woman's personhood but as "damage to her family's honoring the modern social world, it is the need of the hour to amend the law relating to marital rape as rape is always a rape regardless of the marital status or age of the women.

Key words: Marital rape, criminalize, rights, dignity, body.

Introduction

In the modern society, the law of the land has moved forward to protect the status of women in different direction, but the issue of marital rape was never a question among the Indians for a long time. It is due to lack of knowledge about women empowerment that the subject of marital rape has not been discussed in India so far; and another contributing factor is lack of literacy in India. The nature of Indian society is mostly patriarchal, where women are always treated as inferior in the family and the husband playing the dominant role. This is one of the important contributing factors, why the question of marital rape never arises, though the incident prevails secretly in many families and the wives are the silent victims. In general, our society believes that breaking a bond of marriage is unholy and against the society, though, indeed true in many senses, but in some corner, there is one wife, who wakes up every day sleeping next to her rapist. The tragedy may extend to such that the desire to live within her may vanish. The notable reason that may be held accountable in the country is that wife in the family is ignorant; illiterate; that results in the full devotion towards her husband and becoming very accustomed to fulfill the desire of her husband, even if it is against her will. One difficult condition that put a wife always silent is that, when it comes to marital rape, society accepts marriage with a religious ceremony as an institution duly accepted by society. The important question that arises is that the unwilling sex between the couple is not a rape just because of the marriage institution and just that the wife is of 18 years, when the element of rape is present in every action of the husband. Does it mean that a married woman does not have a right to privacy against her husband? The exemption of husbands from punishment against a marital rape is entirely contradictory to the objective of the fundamental rights, as the mental trauma of the woman is same irrespective of the factor of marriage. In the Indian family, marriage is often considered as an important ceremony regardless of the caste or status and it is also very clear that breaking a marriage bond by the wife on account of any reason is considered hideous in the society and a lot of stigma surrounds her from the date of her divorce. At the same time, this marriage can be the beginning of a painful life journey for many women, and often, women choose to be silent and bear the pain because of the social pressure. The reality of marital rape condition in India can be seen from International Men Gender Equality Survey conducted by International Centre for Research on Women, which observed that out of five men, one man forced his wife to have physical sexual relationship with him. Hence, this data shows that 20% of men in India accept that they compel their wives to have sexual relationships.

Historically, India was under the British till the partition of India. From the entry of the East India Company in 1612, many of the laws were formulated during the colonial period. As a result, the influence of the English people can be seen in many of our present laws. The concept of the above statement cannot be applied in the modern world scenario as it is a rights centric society that gives importance to every human right of man. In the recent case of the Indian apex court, Justice K.S. Puttaswamy vs. Union of India [1](2018) accepted the fundamental right to privacy; that is to protect one's body against unwilling sexual intercourse. Justice K.S. Puttaswamy's case was again cited by Karuna Nundy, Advocate while arguing that privacy should not be used to hide patriarchal mindsets"

It is pertinent to mention that publication of materials through electronic media and various modes boost the multiplication of information and in the case of *DharamrajBhanushankar Dave v. State of Gujarat,* the Hon'ble High Court held that the petitioner was unable to provide any violation of the law by way of the publication of the court judgment that can be addressed under Article 226. It also held that publishing of any judgment or proceeding on a website would not come under the realm of 'reportable' as understood in context of judgments reported in a law reporter. Subsequently, the Hon'ble Madras High Court in *Karthick Theodre v. Registrar General*, after much deliberation, and considering various judgments of English Courts and the Supreme Court of India, including K.S. Puttaswamy (supra) held that the right to be forgotten could not exist in the context of judgments delivered by courts. It can, therefore, be taken as an established position of law that public access to judgments of Courts is an integral precept of the concept of open justice, promoting the rule of law.

Literature review
The book on "Rape Laws in India the Heinous Crime" by Goel and Marwaha published on December (2019) is a book that tries to bring in perspective, the causes of the ever increasing Indian rape cases. It explains the lacunae of the law in practice. This book consists of a scholarly article by different authors of various domains.

Paradoxes of Marital Rape Laws in India by Paul, 1st edition (2021) focus on the social issues of rape in India. It discusses the various laws and challenges in the present society at large. It explains the multiple effect of rape on person and mentions the measures for mitigating the rape cases in India.

Pollak (2004) in, 'An Intergenerational Model of Domestic Violence' , deals with the degree and nature of violence, its extent and other factors for its manifestations very much lies on the nature on which the crime is carried out which has an aftermath on the gravity of violence suffered by the victim , thereby also affecting the victims vulnerability in the criminal justice system. The extent of vulnerability and violence committed therefore, is responsible in moulding the identity of victims by shaping hidden biases, prejudices and projections

Crenshaw (1989) added various dimensions to the problem of violence against women when she found the word intersectionality and the same can be found to be very relevant while dealing with violence in marriages and its complexities in families of higher or lower economic status, castes, communities, geographies in the Indian context.

Spieler (2011) in, 'The Maria da Penha Case and the Inter-American Commission on Human Rights: Contributions to the Debate on Domestic Violence Against Women' , deals with the States liability to make sure that the various institutions dealing with various crimes relating to matrimonial issuesand its principle of due diligence laid down by International Commissions which is the global trends with respect to state responses to situations of matrimonial responses.

In Public Secrets of law: Rape trials in India by Baxi (2014), deals with the ethnographic account of rape trials that shows the socio-legal tolerance of sexual violence in India. It deals with the socio-legal processes underlying rape trials. It also deals with how the various guidelines of the Supreme court are routinely disobeyed. This book also deals with the various ways in which public secrecy is subjected to specific revelations in rape trials that brought injustice to the victim.

Objective
To understand the actual condition of married women facing sexual assault from their partners;but could not do anything as they are married, bonded by religious and social ceremony. It also aims to highlight the actual performance of the present laws in India.

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[1]Writ Petition (Civil) No. 494 OF 2012

Scope
In this paper, the researcher limited the scope on rape law under the Indian Penal Code in the context of marriage.

Methodology
In this paper, the data is collected by secondary methods like books, journals & Government Official Websites.

Present status of law with regards to marital rape in India:
Marital rape means a husband does sexual assault with his wife against her willingness. The basic factor is lack of willingness of the wife for any sexual relationship due to whatever reasons thereof. Under Indian Penal Code Section 375 includes every form of sexual assault without permission of a woman.[2] Under Section 375, Exception 2 mentions that unwilling sexual assault between husband and wife over fifteen years of age gives exception from prosecution. As per the present law in India, a wife has given permanent consent to have physical relationship with her husband after her marriage with him. It is very sad that in India, even though, man and women are a separate legal entity, man has the right to rape a wife under the umbrella of social institution named marriage solemnized by religious ceremony.

Status of Rape Cases in India[3]
From the table below, it is evident that rape occurred every day. The crime of sexual offence against children shows a rapid growth in the country. If the reported number of cases relating to sexual offenses against women and children is so high every year, there will also be large number of cases that remain unreported due to many reasons. If India recognized marital rape and criminalized it, the number of cases relating to rape would be much higher. If the dignity of women and children are humiliated and violated every year in their own country, it is the duty of the Government to take effective steps towards the protection of women, whether they are married, minor or unmarried women; because victims are mostly female in every situation. Allowing of rape under the umbrella of marriage does not bring justice to the victim of marital rape and sexual violence by a man is always same whether he is the husband or another man.

Year	Number of rape	Crime under IPC	POCSO	Total Cognizable IPC Crimes & Cognizable SLL Crimes (States and UT)
2015	34,651	2949400		4710676
2016	38,947	2975711	36,022	4831515
2017	32,559	3062579	32,608	5007044
2018	33,356	3132955	39827	5074634
2019	32,033	3225701	47335	5156172
2020	28,046	4254356	47221	6601285
2021	31,677	3663360	53874	6096310

Steps taken to criminalized marital rape: -
India is a democratic country that has not criminalized marital rape like China, Saudi Arabia and Pakistan, when more than 74 countries in the world have criminalized it.[4] According to International Men and Gender Equity Survey 2011, out of five man, one men compel his wife to have a sexual inter-course and 14% of married women face a marital rape in India as per the New 18.com.[5] The first innovative step was taken with the J S Verma Committee, which UPA government has taken up in December 2022 and recommended that forced sex with own wife should amount to rape by husband. In short, the recommendation of the Committee is to remove exception mentioned under IPC and the law should be modified in such a way that marriage should not be made

[2] Kumar Askand Pundey, B.M Gandhi's Indian Penal Code (2017), Eastern Book Company(4th edition, reprint 2019)

[3] https://ncrb.gov.in/en/Crime-in-India-2021

[4] /www.insightsonindia.com/2022/01/17/plea-for-marital-rape-to-be-criminalised/

[5] Live discussion on 17,January, 2022(CNN New 18)

as a justification for a severe crime like rape or sexual violation.[6]Also during the year 2013 the UN Committee has strongly suggested that Government of India should consider marital rape as a crime. On the other hand, the 172 Law Commission Report refuses to criminalize the marital rape on different ground.

In the case of Suchita Srivastava v. Chandigarh Administration,[7]the apex court related the right to make choices on acts of sex with citizens' fundamental right to personal liberty, privacy, dignity, and bodily integrity under Article 21 of the Constitution. Justice K.S. Puttuswamy (Retd.) v. Union of India,[8]The apex court stressed the importance of the fundamental right, which guarantees to all citizens the right to privacy. This privacy includes privacy in respect to sexual relationships too.

This exemption of rape under the definition of rape has been challenged. From Delhi High court Justice Rajiv Shakdher was dealing with the case originated from RIT Foundation Vs Union of India W.P. (C) No.284/2015 (India) in 2015; wherein Government has opposed the criminalization of marital rape as it can destabilized and impair the institution of marriage. This is one of the common points of critique, who are against criminalization of marital rape. The matter is still pending in Delhi High Court, which gives exemption to Section 375 of IPC for forceful sexual assaulted exemption to a man from having sexual relationship with his own wife without her consent, which is an offence of rape.[9]

RIT foundation has taken an active step towards encouraging social equity and gender equity in India as a whole and the women in her families as well. The said case was filed by Chitra Awasthi, social worker of the foundation and states the reason for her pursuance of the case. It was about ten years ago, there was a female worker. She had a husband, who was drunk and did not do any job. He used to demand money from her for money to have alcoholic drink. In case this poor lady could not provide sufficient money for his liquor, he used to rape her without her consent. This situation continued for many years; as this poor lady was not knowing her rights against her own body,and hence she did not tell anybody. Though the case is still pending in the High Court of Delhi, still in India it is the most awaited verdict like the Nirbhaya Rape Case; especially women are looking forward to what the Delhi High Court would bring forward for the future of women. In the last few years, the court has struck down Sec 377, which criminalized gay sex and Sec 497 that punish male adultery on the ground of violation of the constitution. If the same ground is enforced by the court, many women will be free from their sexual prison. Women will step into the new world with a right to say "No" when sex is demanded by her husband. Consent of both the parties will be a necessary element for sexual intercourse within marriage if the case wins the demand of the women.

In the case of Independent Thought V. Union of India,[10]the apex court of India on October 11, 2017, mentioned that Section 375, Exception 2, of IPC should be struck down, if it is related to girl child below 18 years affected seriously in following situations, where it violates to Articles14, 15 and 21 of Indian Constitution; and it is not in consistency with POCSO. Hence Indian Penal Code Section 375, Exception 2 should be struck down even if the wife is not below 18 years,as it is not rape by a man with own wife if she is above 18 years in the present law.

International Law for the protection of women against sexual violence:
According to CEDAW, categorically stated that discrimination against women includes whatever bodily, mental, emotional, or sexual injury to women (GR-19). In addition to that there is an alteration in definition of

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[6] Jagriti Chandra, Key judgments puncture government's defense on marital rape (5, march, 2022), https://www.thehindu.com/news/national/key-judgments-puncture-governments-defense-on-marital-rape/article38267927.ece

[7]Suchita Srivastava vs. Chandigarh Administration, Civil Appeal No.5845 OF 2009 (Arising out of S.L.P. (C) No. 17985 of 2009)

[8]K.S. Puttuswamy (Retd.) vs. Union of India, Writ Petition (Civil) No 494 of 2012;

[9]Nupur Thapliyal, Marital Rape: Delhi High Court Reserves Judgment In Petitions Challenging Exception To Sec. 375 IPC(10, march, 2022), https://www.livelaw.in/news-updates/marital-rape-delhi-high-court-reserves-judgment-exception-sec-375-ipc-192450

[10]Independent Thought Vs. Union of India, W.P. (c) No. 382 of 2013 (India).

GR-19 and this alteration states that marital rape is rape, as it lacks free consent and coercion involved[11.] India being a signatory to the CEDAW, is expected to amend and revise the law with regards to the recommendation but till today it failed to do so. This action of India breaches the international human rights standard. India's failure to criminalize the marital rape not only breaches the CEDAW, but also ICCPR, UDHR, Beijing Declaration, and DEVAW. As per ICCPR Articles states that all human beings are equal as far as law is concerned and have the entitlement to equal protection before law, against any discrimination on account of caste, creed, sex or other status.

All human beings are free and equal in dignity and rights, according to UDHR Article 1 and people are equal and free as far as rights and dignity are concerned; and under UDHR Article 28humans are entitled to a social and international framework in which the declaration's rights and freedoms can be fully acknowledged. As a signatory to the above, India is obliged to encourage the bodily autonomy of the body of women, who are married.[12] The Declaration at Beijing also recommended to all governments of the world for implementing the CEDAW and for changing laws and penal codes, which are against this declaration.

Suggestion

Allowing marital rape in the country violated the rights of women to live with dignity under Indian Constitution. Under Indian Constitution, Article 21 speaks on right to live with dignity. The Hon'ble Supreme Court in Francis Vs Union Territory AIR 1981 SC 746 mentioned that right to life include right to live with dignity; and this opens a wider door to include various kinds of rights within it. So, if a female member of the house is unable to life of dignity with her own husband it indirectly deprived her rights to life with dignity through Indian Penal Code. Since man cannot be raped forcefully by women, the right to equality before law should be maintained by enabling the deletion of exception clause. Under Indian Penal Code, Section 375, Exception 2, as a married man can rape his wife under law and a woman has no chance of raping a man; hence there is presence of gender inequality of law. Further, State of Karnataka Vs Krishnappa, the court commented that physical violation and humiliation both are against the provisions of law, and it is interference into a woman's privacy and holiness of a woman. In addition to that court held that any physical relationship without consent of a woman amounts to sexual violence".[13]

The main critical point of deletion of Indian Penal Code, Section 375, Exception 2, is that, protection of women against marital rape can result in the huge number of false allegation by women, so, in case of criminalization of marital rape by the law, a penal provision for false accusation of the husband is to be included to protect them from constant harassment by the wife. India has witnessed an enormous number of false accusations against helpless husbands or husband families under the Dowry Prohibition Act and the Domestic Violence Act. If a marital rape is criminalized, the proof beyond reasonable doubt should not be applied in the marital rape. It should be remembered that every law is open to abuse and criticism, and every crime has to be proved.

In case of criminalization of marital rape, the onus of proof should be on the wife or else the court will be over burden. Many critics argue that direct evidence will not be available for what is done in the bed privately by the couple. But circumstantial evidence can play a vital role in trial of the case. In case of marital rape, when the proving responsibility is on the victim, direct evidence can be obtained with the help of medical practitioner by the victim women as an unwilling sex may result in changes on the part of vagina by showing abrasion, swelling or hematoma etc.

High Court of India has approved a justification ground for divorce of rape by a husband without the consent of his wife. If these judgments are introduced in the personal laws/ secular law or the customary law, justice will be achieved by many women. Recently, on 30th July, 2021, High Court of Kerala held that in India marital rape is

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[11] Lexlifeeditor Marital Rape: A Question of Sexual Autonomy of Married Women(6, March, 2022), lexlife.in/2022/03/06/marital-rape-a-question-of-sexual-autonomy-of-married-womenᴼᴮᴶᴼᴮᴶ/

[12] United Nations. Universal Declaration of Human Rights. (UN, New York, December 1948). Article 28, https://www.un.org/en/about-us/universal-declaration-of-human-rights

[13] State of Karnataka v. Krishnappa, ILR 1994 KAR 89, 1993 (Equivale
nt citations: 2000 CriLJ 1793, JT 2000 (3) SC 516, 2000 (2) SCALE 610, (2000) 4 SCC 75, 2000 2 SCR 761, 2000 (2) UJ 919 SC)

not regarded as a criminal offence, it can be a justification for applying for divorce.[14]The court commented that a wife and husband are partners; but both are equal and have equal rights and nobody is superior to other with respect of body and identity; and that marital rape constitutes autonomy of individual. This amounts to cruelty.[15]Justice A. Muhamed Mustaque and Justice Kauser Edappagath held that just because under our present law marital rape is not a punishable offence, it does not mean that marital rape cannot be ground for granting divorce against the husband.[16] In case marital rape is considered as a justification for divorce under various Indian laws and other customary laws, the torture through marital undergone by many women would achieved relief as marital rape involved physical assault, mental and emotional force against the them.

Conclusion and Findings

If marital rape is criminalized, it may destabilize the institution of marriage and may in-directly cause a disorganization of society to many extents. However, protecting the institution of marriage to that extent may result in the violation of natural rights of women. Marriage cannot be seen as permission to compel physical relations. The objective of Section 375 is for protecting women and penal action against those who violates through cruel acts; and this cannot be achieved by giving exemption to a husband for marital rape without consent of his wife as the mental and physical agony are same whether a woman is married or not.

Marital rape exception in 375 IPC should be strike out as rape can happen at any age, not only below the age of 18 years or 15 years women and women should not be a victim of rape under the ceremony of marriage. As per the health survey held by Government of India 2019-20, approximately 30% of women between the age of 18 and 49 experienced violence by their husbands. The sexual violence faced by Indian women is 17 times greater from husbands than outsiders. Allowing to remain the exception 2 of 375 IPC result in the allowance of rape to women without considering the age and under the umbrella of marriage. Careful consideration should be given as sexual assaults unlike the other violent crime result in impact on psychology of women. General awareness among the people by educating them in considering women as important life partners is a task on priority, similar to enact laws to protect the human rights of women. By doing so husbands will not have sexual intercourse without the consent of their wives. If a married man forcefully slept with his wife, he will have to face the legal consequences, and this may reduce the instances of marital rape, if it is criminalized. Having sex without consent and violence from husbands are violation of human rights and fundamental rights of women. It is also affects India's global image as we are signatory of CEDAW, which works against women's discrimination. The crime of marital rape is not in consistency with the international commitments.[17]

[14]Sanyukta Dharmadikari, High Court of Kerala considers marital rape as a justification for divorce.. Retrieved from https://www.thenewsminute.com/article/landmark-judgment-kerala-hc-recognises-marital-rape-ground-divorce-153556#:~:text=CRYPTO-,In%20a%20landmark%2, on 26th August, 2022.

[15]Kashish Khandelwal, Indian Courts hold marital rape constitute a ground for divorce (7, August, 2021) https://www.jurist.org/news/2021/08/india-court-holds-marital-rape-constitutes-sufficient-grounds-for-divorce/

[16] Special Correspondent, "Marital rape a ground for divorce, rules Kerala HC". https://www.thehindu.com/news/national/kerala/marital-rape-a-ground-for-divorce-rules-kerala-hc/article35768148.ece

[17]Sreeparna Chattopadhyay, The country must criminalized marital rape right away(24, januanry, 2022),https://www.livemint.com/opinion/online-views/the-country-must-criminalize-marital-rape-right-away-11643044014398.html

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A STUDY ON LITERATURE REVIEW OF AWARENESS AND INVESTMENT BEHAVIOR OF INVESTORS TOWARDS RISK & PORTFOLIO MANAGEMENT

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ABSTRACT
Investors are investing their earnings with different aims and goals such as returns, security, appreciation, Income stability. Investments are made from investor's savings. While investing money in different sectors of investment what type of perception investors followed towards risk & portfolio management. This research is based on literature review of investors' perception towards risk & portfolio management, how to take the decisions while creating an individual portfolio, how to manage it in different risky situations and how to diversify that risk, now a days, every category of people investing their money in different investment sectors and all sorts of fields. With the fast development in the Security market and investment sector in the recent past, presently, every individual aim is to be financially independent, strong & secure their future with sufficient funds. This study considered only employees of government and private sector organizations and their payment scale category. To achieve an important objective of every retail investor is to select the suitable investment options out of various financial products available in the market with risk factors associated with the better returns respective to liquidity and safety of principal. With this all criteria and principles, how investors are able to create their portfolio objectives with guaranteed returns and how to bear risk & increase their risk appetite capacity according to their priority in needs and also manage it with respect to the market economic conditions and the risk securities that exist in the market.
Key words: risk perception, portfolio management, investment avenues, Investment awareness

Introduction

Investors are of three types, some are risk seekers, Risk averse and risk neutral. This is all about the behavioral finance or judgmental condition of individual investors, this all also studies or depends on some economics of decision making and utility theory. For understand and know the behavior of investors, first must learn, or study some economics behavioral theory such as modern behavioral finance theory and neo classical theory.

Portfolio management is nothing but creating, selecting and measuring risk in investment avenues to meet retail investor's short term, mid-term and long-term financial goals and risk tolerance capacity factor of an investor. Creating and managing an investment portfolio by any financial infrastructure industries is as critical and difficult as market risk. Portfolio Asset management can be created with various investment options and avenues to minimize the risk level associated with returns and how to measure it and get a high return out of it.

Risk Management and diversification of risk consider Speculations, awareness of requisite liquidity and collateral worth, surety in income, monitoring capital growth, Tax benefits and exemptions, and purchasing power stability and tuck away ability.

Financial Market risk is one of the chances that the weightage of an investment avenue always follows the increasing and decreasing trend of the stock market. Market risk, inflation risk and Interest rate and inflation risk are the risk that the value of an investment will get reduced when interest rates increase and vice versa. Inflation risk is one of the influential factors that the value of an investment fluctuates because of the country's economic condition. Credit risk mainly focuses on whether a bond issuer or borrower can repay a bond debt or interest on time or once it matures.

In a technique of diversified portfolio options, the assets do not associate with each other. When the responsiveness of one variable depends on another variable, then their value fluctuates. It tries to minimize risk involved in investment products because, no matter what the country's economy reflects, some financial asset investments will give benefits that can be identified and also losses observable which relate to the other assets. Risk can reduce or increase due to many technical tools but there is a probability to disturb the entire portfolio by one single transaction. A diversified portfolio is the best technical tool to defend against a financial crisis.

Research Gap

The aim of this study is to collect data from secondary sources related to behavioral finance and its impact on investment decision making. Many researchers have observed the impact of the decision-making process and investment in the security market with high returns with less risk and security in the market. But no one has given exact ideas or strong parameters that every investor has to follow or consider before investing their earnings into an investment sector, no one has analyzed which statistical tool should apply for anticipation of future risk and uncertainties. How would they get updated with the different strategies and planning? So this research is trying to find out the parameters which are useful for retail investors for better returns.

Literature Review

There are some research papers about the topic in the literature. Abramov (2015) focused on how effectively traditional approach throw the impact on portfolio management This article mainly focused on those investors who have believed in long term investments, investments in communal bonds or a guaranteed returns are more profitable in terms of higher chances of assurance and risk return ratio than investments in equity markets, retail investors mainly concentrate on investments in guaranteed returns instruments, including corporates bonds, commercial bonds to maintain a stable risk–return ratio for a creating individual portfolio, with this retail investors needs to increase the investment in low risk financial securities options during the process of asset allocation.

Boevi (2020) conducted on Diversification which is one of the important technical tools and techniques of investment decision-making under risk and future uncertainty which actually exists in portfolio management. This Study meet the objective to rectify the error by reviewing the concept of portfolio management theory. Main aim of this study is to focus on the few asset diversification principles such as study of large numbers of investors, correlation association, capital asset pricing model, risk contribution and interest rate parity, diversification principles and how it applies in measuring risk.

Caesar (2016) identified that, an international portfolio diversification is the main source of world welfare gain, to analyze the effectiveness of gain from trade and the productivity through international level, International factor movements is important diversification. With the empirical and Conceptual argument with reference to the International Investment Diversification shown towards Individual and Corporate Investors. In this research they analyzed benefits like Risk and return, financial market structure, Diversification, study of International Venture Capitalist, Culture integration, and Micro and Macro finance.

Delfin (2020) finds out that In creating and maintaining portfolio safely, diversified options are applied highly, that portfolio transactions relate with fundamental damage and that rebalancing is done through diversification tools which depend on the initial network balancing. Study also said that large diversification benefit is achieved through network configuration, rebalancing but significant that makes the network configuration risky in front of unselective stocks.

Gangwani & Mazyad, (2020) conducted on working women from government sectors and private sectors in India who want to be financially independent & also want security by investing their savings into financial investment avenues to handle critical situations in their lives. Do working women have awareness about risk & portfolio management? This research enlightens that despite awareness and knowledge of the financial sector and its management among working women, only 33% can believe and take their own investment decisions, compared with 64% men employees. Of these, only 30% did their own charge, while most were spoken to by their spouses, family members or parents. And this research found that the main head of the family may be bread earners and that husbands played a vital role (40%) than parents or other family members, out of that (27%) is encouraging women to take decisions related to their investments and spending's, savings.

Ibrahim & Tayfun (2016) say basic and advanced financial literacy awareness in students is a relationship. Macro and microeconomics activities and decision-making processes are important to have knowledge of savings, investing's, consumption to understand the financial products and concepts and build the ability and capacity to analyze the risk and inviting opportunities.

Jayeola (2017) studied how Diversification strategy options will affect investors' portfolio to improve their portfolio. Main purpose of this research is to Annalise the relation of less risk with high return of portfolio. It is an opportunity by which retail investors can improve from a micro level firm to macro level firm. To analyze procedures for creating effective or smart portfolios for rational investors and to exhibit the maximum gain by diversification of which assets are included in the portfolio.

Jastina (2012) studied employees' investment from their savings is reviewed mainly on the relationship between risk and return on their investment portfolio options, higher the risk, higher the return and vice versa. While investing Pension funds in different options of investment avenues, some important point taking into consideration that, to find the alternative options that lead to maximize returns with minimum risk, that increase the effectiveness of an investment decision, with this it helps to find out that portfolio diversification positive effect with minimizing risk which involved in creating portfolio and it also helps to increase the performance of selected investments.

Lokovic (2018) studied efficient comparative analysis of diversifications of investments, guaranteed and nonguaranteed investment avenues in portfolio and testing rationality of the international markets diversification tool of investments. Through this study, it also gets some valuable inputs by international diversification of investments analysis. Many financial market securities in a portfolio will get increased as long as its marginal benefits, and to decrease investment risk marginal costs should exceed its limit, with respect to increasing portfolio asset management costs.

Marylin (2011) identified some risks which involve creating a portfolio of investments with respective risks struggling by the Mauritian banks that are inflation risk, market risk, and credit risk. The Mauritian banks have taken help of diversification of portfolio tools to efficiently manage risk throughout. After using a diversification tool by Mauritian Banks the results indicate that tool has successfully shown the result to minimize the risk.

Malik & Saini (2013) suggested that an investor should have scientific and analytical skills before investing his savings into different risky Financial avenues available in the market. An Investor should be rational and have an emotional perspective. An investor must invest his savings into guaranteed and non-guaranteed financial securities and create his portfolio with a technical and analytical analysis knowledge. Investors also have knowledge of Portfolio management theory and principles before investing and creating his own portfolio.

Naveenan (2019) studied past data has collected and compared to analyze risk and return involved in portfolio investment through measurement of standard deviation of risk and returns involved in equity portfolio and it is an evaluation of returns achieved through few statistical tool such as Standard Deviation, correlation regression and risk analysis observed by using Standard Deviation of returns, Beta and Sharpe's Ratio.

Olaleye (2011) overviewed various options available in the market for investors to diversify their real estate portfolio. In real estate property portfolio diversification and its performance analysis within real estate portfolio diversification were observed with different technical tools with how to measure risk and minimize it.

Shukla (2016) studied surveyed that Women in India, mainly working women of north Gujarat region, are now actively involved in investing her savings in financial market securities with scientific and technological skill & becoming financially independent. Now Indian scenario has changed, women has started getting knowledge of various parameters before investing their surplus money such as degree of their risk tolerance level rather that influencing of family members and close friends and now started to get exposure to new and modern innovative investment avenues. This study observed that there is no significant relationship between knowledge related to the stock market and creating investment but there is also a significant relationship between Age and earnings.

Critical Evaluation: - The body of the review containing
In this research study few literature review have been taken related to how to manage risk in investment sector and create investors portfolio, for this purpose awareness or financial literacy is playing major role or not, some research in this regard conducted to see perception and awareness of various available market securities has built the capacity and willingness of working retail investors to save, spend and invest their savings for higher, regular and secure returns. Some research has highlighted the choices of investors and awareness towards the various investment alternatives avenues, at which and how much investors are going to invest their savings out of the best and promising alternatives options of investment criteria available in the market and investors should aware about the rates and ratio of investments, returns with risk factor of the best alternatives investments options in the market. To know the reality or fact of investors, whether they are fully aware about the interest rates ratio and inflation trend, what is currently affecting the respective alternatives in the market for Investing in various types of alternatives. It is an interesting act to make each and every individuals throughout their life with irrespective to their financial background and their different category of income slab rate, and the investors who are having extra sources of income which is over and above of their needs to invest in the other form of investment options, few literature review said few factors like Demographic factors,

Economic factors, Social factors, Organizational factors influences investment decisions of retail investors, some research have done on opinion of salaried women how they are investing their savings in investment sectors, With a changing era and new trend, women has started actively investing their surplus or extra money, by knowing the ups and downs , crises and uncertainties of the market, whether it all depends upon the various parameters such as degree of their risk tolerance level, influence or backup of close family members and friends and trying to dare to get exposed to modern and innovative investment avenues, so some research study has been focused on the analysis of investment preference of working women and influential factors affect their investment decision. Age, knowledge, tolerance level and income were found to be directly correlated with their investment pattern.

There is no positive association or there exists a positive association between social and financial factors like age, income, marital status, qualification, occupation and awareness of investment avenues and their benefits literacy of working women towards various investment options.

In some papers heuristic factors like representativeness, anchoring and availability bias which are most important affecting the investment decisions.

Some researchers surveyed that investors follow two types of approaches in constructing the portfolio of securities e.g. traditional approach & Markowitz efficient frontier approach.

Conclusion

By comparing some review and research papers this study concluded that the diversification tool for risk management is used by many investors for managing and creating portfolios. Higher the risk higher the returns, portfolio diversification has immense and positive impact on reduction of risk and an increase in performance of Trust and faith of investors investments. For evaluating the risk and return on equity portfolios, investors should have knowledge to compare data through Beta and Standard Deviation techniques so that they can find out how much risk is associated with investment decisions and available securities. Sharpe's Ratio also can be used to analyze the behavior of investor's perception and their awareness. When the point comes about investors' awareness and knowledge they should also get educated about economic theory and behavioral theory analysis, each and every investor knows what utility & neo classical theory suggests before or while investing their hard-core money into the security market. To get marginal benefits from various securities in a portfolio or it should be increased in the form of reduced investment risk. Few research also analyzed that for retail investors should invest in guaranteed returns like investments in corporate sector, bonds are more profitable than equity securities and other security options in terms of the risk–return ratio, in short there is significance exists between awareness and investment behavior towards portfolio and risk management, some investors are risk taker, risk averse & risk neutral according to the appetite and tolerance level of risk capacity in the market investors change their behavior & investing habits, but definitely there is positive significance is exist of some factors like Demographic factors, Economic factors, Social factors, Organizational factors influences investment decisions of retail investors.

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A STUDY ON MANAGERIAL PRACTICES TOWARDS CUSTOMER RELATIONS WITH SPECIAL REFERENCE TO AXIS BANK

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ABSTRACT

Privatization of the bank in India has given maximum service options to the customers. Hassle free transactions, use of IT, customer oriented public and private services brings increase in use of banking services. Nationalized banks also adapted the digital mode of service. However, private banks offer more service with less duration of time for attracting customers towards them. Rural part of India are also getting the benefit of private sector banks. They also offer Govt. schemes for agriculture, small and medium scale industries etc. Private banks are more popular for giving maximum service to their customers. Extended timings for service, fast process, maximum focus on digitalization, home service, holiday banking etc. are the major factors for their popularity. Not only private banks but the entire private sector is getting affected by customer relation management.

Profit of the private sector bank i.e. Axis bank is deliberately investing in building the customer relationship programmes. Competitive environment has created a pattern of digitalization and invited more risk towards banking transactions. Non-banking services also get the risk in transactions. This situation gives rise to the term Customer Relationship Management. Retention of unhappy customers can be possible through the CRM programmes.

This research paper deals with the study of customer relationship management in private sector banks with special reference to Axis Bank.

Keywords: Bank, CRM, Products, Customers, Services

Introduction:

Customer relation Management is the crucial element in every bank. In private banks like Axis Bank, CRM practices are proved to be very effective and attract loyal customers towards them. This brings good growth in the sale of banking products to the customers through direct marketing methods.

Every customer must be satisfied in getting the financial services. Banks are often ignoring the fact of customer satisfaction at entry level. However, Axis Bank is providing best in class services to their existing and potential customers. The level of the satisfaction, customer support, employee orientation towards the CRM implementation etc. are the key elements in success of the bank.

Managers play a very important role in maintaining the good relationship with the customers due to the intense competition in the banking sector between private and public sector banks. Every bank wants to attract more numbers. Apart from the regular services, banks have to achieve the targets of mutual funds, insurance policies and fixed deposits in order to achieve the targets of all the services relations with the customers obviously plays an important role.

Management of such CRM practices must be on priority while confirming any financial transactions. This paper studies how the managerial practices are proven to achieve good CRM implementation. For this purpose, CRM strategies must be followed by the Management of the banks. Axis bank is an apex bank in providing quality service to their customers. Further as a part of CRM Axis bank is providing one-day solutions to solve the problem of the customers. In this paper researchers also focus on how the CRM practices can impact on the overall growth of the bank.

Managerial aspects are nowadays oriented towards implementing the CRM strategies which involve digital banking, holiday banking, 24 hours banking, home service, etc. Such strategies make private sector banks like Axis bank to become a differential bank and customers will get multiple choices to enjoy the services from the bank. Management of such CRM practices and implementation of strategies are studied into this research paper.

Multi-tasking services, non-banking product sale, loan recovery becomes easier when there are sustainable managerial practices towards maintaining the CRM.

This research paper further reveals the behaviour and attitude of bank employees towards the execution of Customer Relationship Management in the Bank. Further researchers will focus on awareness of the customers towards the services offered by the bank to them

Review of Literature:
Parvatiyar and Sheth (2001) say that CRM is an inclusive strategy and process of attaining, retentive and combining with selected customers to create higher value for the bank. As per the Gartner Group (2001), they suggested that more than 75% of business units are engaged in CRM promotion practices and unable to take an all-inclusive view of the customers. They observed that customer satisfaction and customer value would be achieved through leadership in CRM. Ernst & Young (1999) suggested that enterprises focusing on CRM practices adapt to new technologies. The problem occurs during communicating with customers, coordinating with processes and technologies while implementing CRM Solutions. While selecting proper technology for CRM practices, Davids (1999) commented that selection of appropriate technology and execution are success factors for the good CRM. Sometimes CRM practices may get failed and such failure may be high in some banks that result in poor customer satisfaction. The CRM initiates offering of personalized products, non-complexity and easy operational activities for completion of financial transactions (Gulati and Garino, 2000). To enhance more marketing competencies Day (2000) suggested that Business enterprises need to extend more marketing competencies for the best execution of CRM. Customer Relationship Management must influence the mindset, values, and norms of the organization. Business units must increase their knowledge and analysis of the customers from various angles. There is a strong need for orientation and incorporation of processes.

In the studies of Mueller (2010), CRM practices are highly dynamic, and every business have to adapt humanistic approach in the development of products. To regain the customers, CRM initiatives must be started at the earliest. Purchasing behavior of the customers were highlighted by Bose (2002). In his studies he mentioned that the invention of the CRM was done due to preferences and purchasing behavior of the customers. For maximization of overall growth of the organization, tailor-made products must be offered to keep customer satisfaction level high. Rogers (2011) suggested the shifting of transactional model to the relationship model is related to the global tendency in CRM. However, long-term association of the customers requires other CRM practices as well. According to the Sinkovics and Ghauri (2009), the requirement for fetching customer relationship management to high cost of direct sales, highly escalating level of competition in the global level, and need for information about various aspects of the business in general, that can be used to increase the levels of market. Utilization of a wide range of CRM techniques (Mathur, 2010). Mathur (2010) suggested a wide range of CRM techniques that to be followed in most of the business. Khurana (2010) focuses on advantages and disadvantages of the CRM. Further he related the CRM pros and cons with the software application. Greenberg stated that CRM can increase the financial status of an enterprise. Sustainable and correct CRP practices give rise to increase in sale of other banking products. Customers will be loyal towards the bank and have good relationships amongst them. While discussing the personalization of services, Dwayne Ball suggested that personalization should give a more satisfactory financial transaction, and more satisfactory and healthy relationship. Personalized services must be simpler to obtain the best services for them.

Objectives of the Study:
1. To study the behavior and awareness of the existing customers towards products/services in banking.
2. To study the service cost charged by the bank and their impact on customers.
3. To study the loyalty of the customers.
4. To study the measures taken by the Axis Bank to ensure the best customer satisfaction.
5. To observe and study the behavior and attitude of bank employees towards the execution of Customer Relationship Management in the Bank.
6. To access the awareness and happiness of the customers with the Bank.

Research Methodology:
This research paper is prepared by using primary and secondary data. It evaluates the validity and reliability of the topic.

Research and Sample Design:
The nature of research is Quantitative Research. This is an Exploratory type of research. Convenience sampling methods were used by the researchers and the Field setting was the research environment. Researchers took 100 customers as sample size and area of the sample was Axis Bank, Chinchwad Branch, Pune.

Sources of Data Collection:
Primary data was collected through questionnaires from bank officers and customers, referring bank records and profit and loss statements. While Secondary data obtained from Axis Bank website, RBI and journals.

Limitations:
Following are the few limitations faced by the researchers:
The geography was large, and I couldn't meet each and every customer. Time was the major constraint. Few customers were not cooperative while asking the questions. The brand name of the Axis Bank affected the good or bad experience of the customers. Further incorrect information given by some customers creates problems in compilation of data.

Initiatives taken by Axis bank for Customer Relationship Management:
If a Customer is loyal to the organization, then the customer is an asset to the organization. Axis bank found that more than 76% existing customers are loyal customers out of the entire customer data with them. This became possible because of best and all-inclusive CRM practices adapted by the bank. Director of the bank mentioned in the annual report that: "the bank's data warehouse, customer relationship management and analytics solutions have helped it target its existing and potential customers in a cost-effective manner and offer them products appropriate to their Profile and needs."

The Bank realizes the value of CRM and IT initiatives offered to the customers for becoming more loyal to the bank. BY imbibing the approach of the CRM, frauds and credit loss also gets lowered.

Initiatives taken by the Axis bank to support and implement CRM:
1. Bank established IT enabled services through which more than 60% customers utilize banking services through online mode.
2. Non – branch channels are serviced with the phone banking and ATM. Customers get multi-channel services.
3. Using Lean Sigma Tool kit, 5S and other initiatives brings more quality in service and customer delight can be obtained from the good quality service. Merge of service objectives and business objectives would bring profit and high customer satisfaction.
4. Comprehensive deposit policy: They monitor the service quality, approvals, customer surveys on annual and triennial basis.
5. To solve the queries, problems, or grievances the bank offers customer helpdesk through call centers, in branch counters, email address, and through bank's website.

Data Analysis and Interpretation
The chart shows various age group of customers having their account in Axis Bank:

Age Group of People having account with the Bank

Number of People	Below 25	26 to 35	36 to 45	46 to 55	Above 55
No. of People	37	21	22	12	8
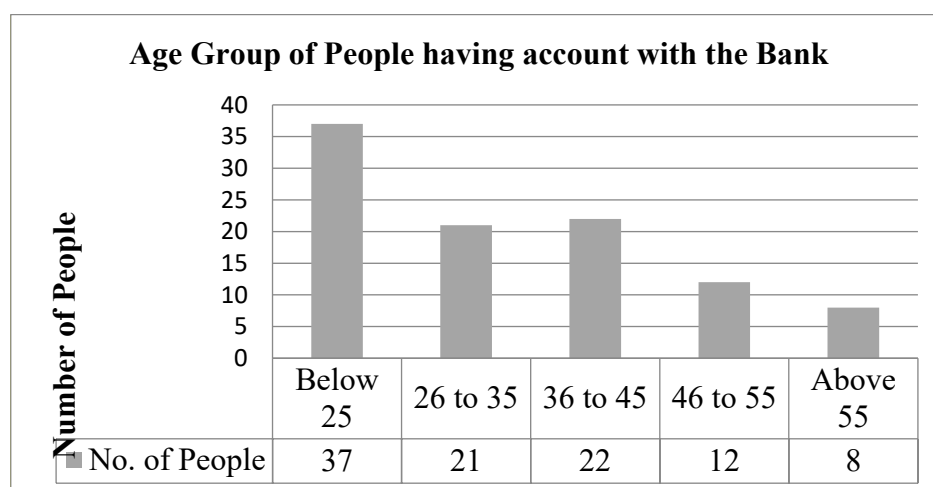
Graph No. 1: Age Group

Interpretation:
Above graph shows that the age group of people below 25 years are more interested and oriented towards the Axis Bank than in comparison with the age group of above 55 years. Young people are interested in availing the banking facilities.

The chart shows time of banking experience of customers with the Axis Bank:
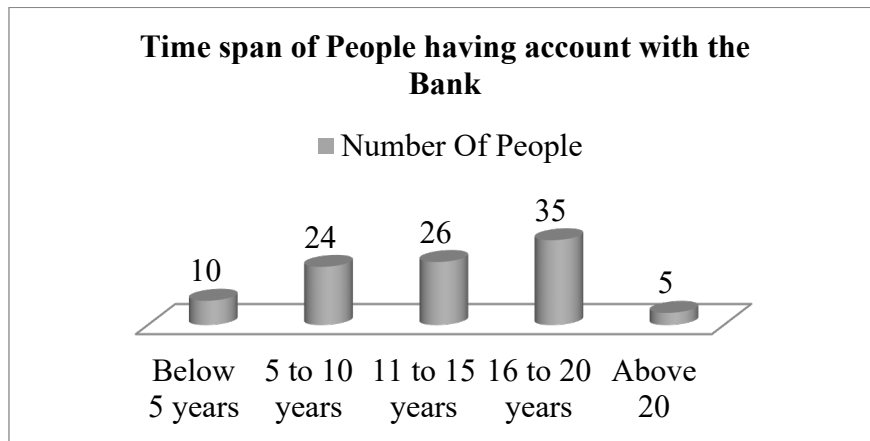
Graph No. 2: Time period of banking experience

Interpretation:
The chart states that most of the customers are in good relationships with Axis Bank for a longer period. It is because of the best CRM practices followed by the Axis Bank. It resulted in customer loyalty also.

1. The chart shows the types of account held by the customers with the Axis Bank:
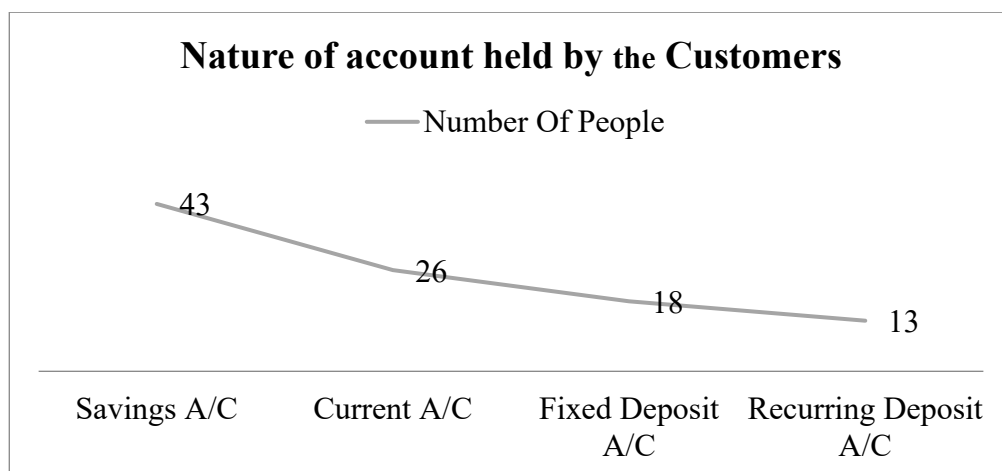
Graph No. 3: Nature of Account held

Interpretation:
Above diagram shows that more of the account holders are having savings accounts in the Axis Bank in Chinchwad region. It may be due to more people being employed rather than entrepreneurs.
The Pie chart shows the frequency of transactions done by the customers in the bank in a single month:
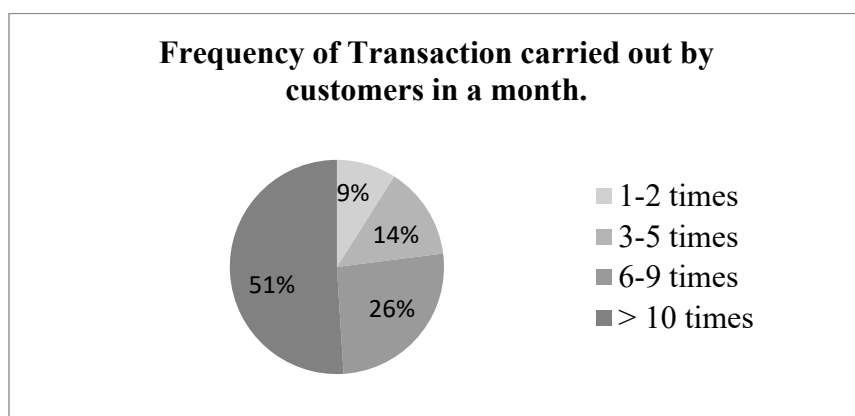
4.1: Pie Chart: Frequency of Transaction

Interpretation:
The pie chart clearly states that 51% of the customers uses banking services for buying and selling of the products as compared to the cash.

The bar diagram shows the way of customers to connect with the bank:

The ways preferred by customers to connect with the bank

Number of People	Telephone	Bank Website	Visiting the Bank	ATM	Others
Number of People	15	26	38	17	4
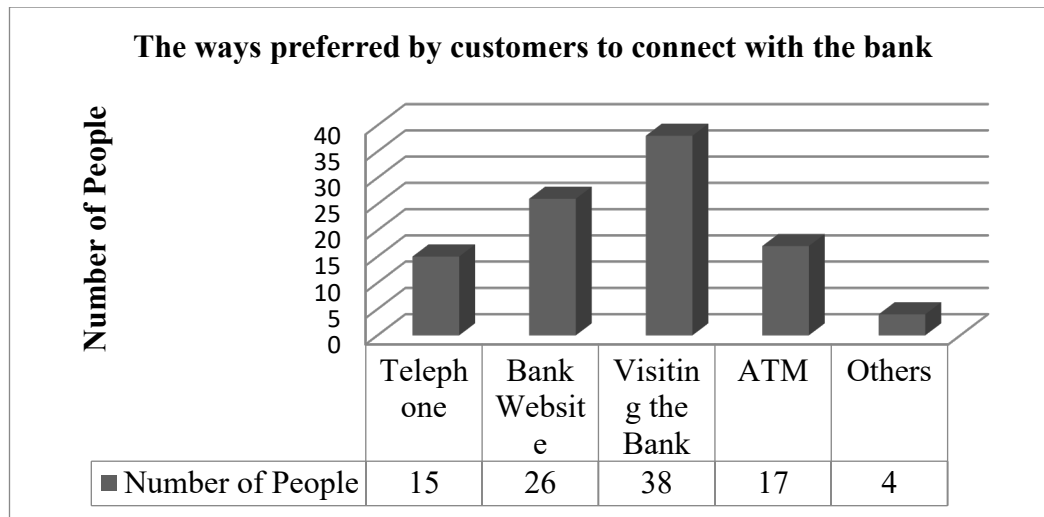
Graph No. 4: Customer connection to banks

Interpretation:
The bar diagram states that 38 customers preferred to visit the branch office of the Axis Bank for convenience in banking operations.
The chart shows customers view about the service charges charged by the bank:

Customers Opinion on service charges collected by the bank
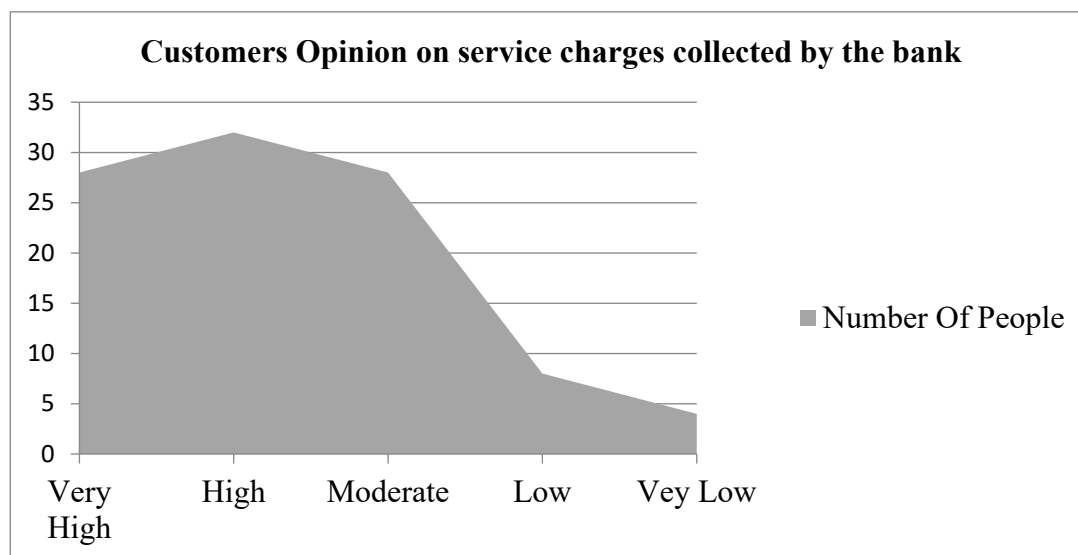
Graph No. 5: Customer Opinion on service charges

Interpretation:
The above chart shows that the customers believe that the service charges charged are little high as compared to the public sector banks.

The chart shows difficulty in opening account in Axis Bank:

Level of difficulty customers faced while opening an account with the bank

Number of People	Strongly Agree	Agree	Disagree	Strongly Disagree
Number Of People	9	12	35	44
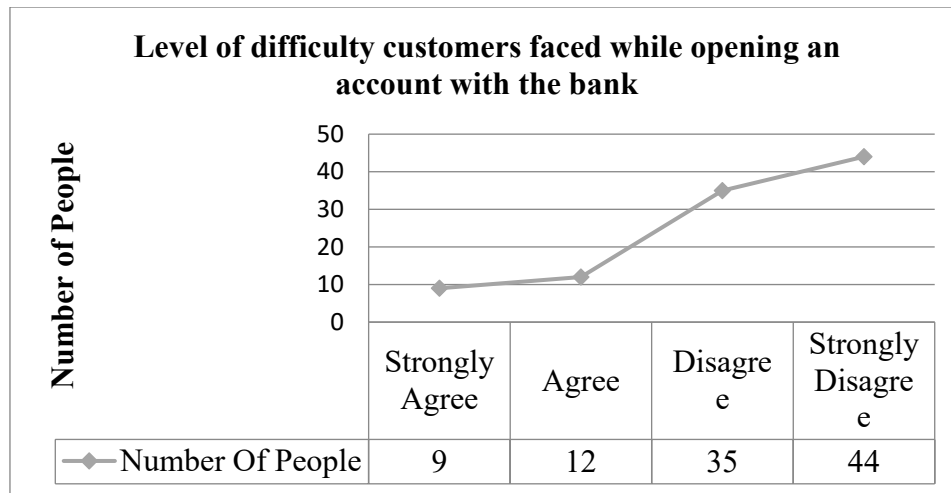
Graph No. 6: Difficulty level during account opening

Interpretation:
As per the above diagram, 44 customers are strongly disagreeing upon the difficulty in account opening. As per their experience with the Axis Bank customers are happy towards the process of account opening.

The chart shows the time duration taken by the bank to solve customers' problems:

Time duration taken by the bank to solve customers' problems

■ Number Of People

Immediate Solution	Within a day	3 to 5 days	5 to 10 days	Still not solved
19	35	29	13	4
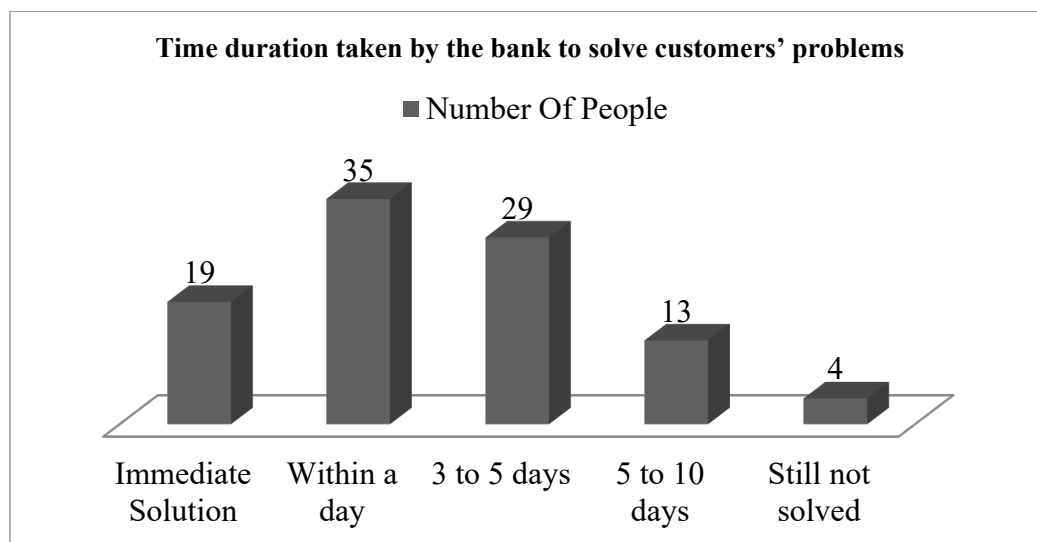
Graph No. 7: Duration to solve problem.

Interpretation:
Above chart states maximum customers get experience of same day problem solving mechanism by the Axis Bank.

The pie chart shows about customers recommending the bank to others:

Number of people who would recommend the bank to others

■ Yes ■ No

22%

78%
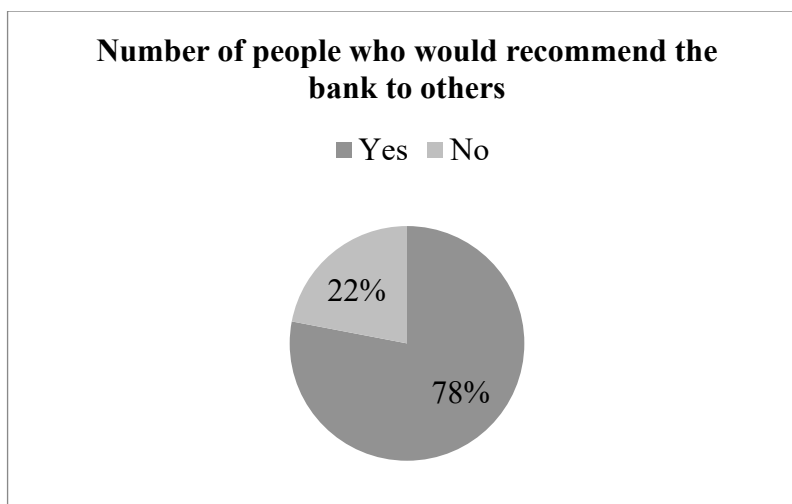
9.1: Pie Chart: Recommendations of the bank to others

Interpretation:
The pie chart clearly states that 78% customers are ready to recommend the Axis Bank to others. This clearly shows the trust built by the bank amongst the customers.

Conclusion:
This research clearly shows a perfect relation between Axis Bank with their customers. It shows how the bank is sensible towards the customers in satisfying them by providing best quality service. It becomes possible because of CRM practices that are adapted by the Axis Bank. Perfect CRM practices implemented by Axis Bank brought lucrative relationships with their existing customers. It also opens direct marketing of the bank products.
Bank will get more success in maintaining a good relationship with the customers if they continue with the CRM practices. Strategic plans must be adapted by the Axis Bank to achieve the paradigm shifts in service provision. Axis Bank has several products for the customer of all types. CRM practices will develop the strategy to give more service with efficiency. Effective CRM practices help the service sector like Axis Bank in getting good and loyal customers.

Findings based on customer data:
1. 84% of customers are aware of electronic services like IT services. Remaining customers are aware about such service but are not utilizing it in full aspects.
2. ATM facility, e-banking facilities and SMS banking facilities are the most popular facilities as a part of CRM in Axis Bank.
3. 43% of customers are enjoying CRM facilities with a savings account with Axis Bank.
4. Customers are having trust in Axis Bank for investment due to good CRM facilities.
5. 44% of customers are having a disagreement about the poor quality of the services provided by Axis Bank.
6. 35% Customers responded towards the best service of Axis Bank. As per their opinion Axis Bank solves problems of the customers within one working day.
7. 78% Customers showed their interest in promoting and recommending the Axis Bank to others. This clearly shows that the CRM programme run by the Axis Bank is making a positive impact on their growth.

Findings based on Interview with Manager:
1. The Management of the Axis Bank is cooperative in nature. They always promote the CRM practices at branch level.
2. The bank policy describes the empowerment of the staff towards delivery of the best service to their customers.
3. Axis Bank is fulfilling most of the relevant expectations from the customers like ease in e-banking, data safety, hassle free banking, etc.
4. Secured payment process at 3 tier system is getting operated in Axis Bank.
5. As per the data received, more than 72 % Customers are satisfied with the operations of the bank.

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A STUDY ON THE PERCEPTION OF SELECT IT EMPLOYEES TOWARDS DIGITAL PAYMENT IN BENGALURU

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ABSTRACT

In contemporary society, the utilization of smartphones for monetary transactions and payments through app-based platforms has become ubiquitous. Over the past decade, India has witnessed a phenomenal growth in internet and mobile phone usage. Digital payments refer to electronic transactions conducted through internet banking, mobile banking, card payments, or at point-of-sale terminals for products and services. This study aims to shed light on the views and experiences of IT professionals regarding the use of digital payments, their level of satisfaction, and the influence of age on adoption. A structured questionnaire was employed as the research tool to examine consumer perceptions of digital payments, with primary data collected from 200 respondents who were categorized based on demographics such as age, income, occupation, and gender. The hypothesis was tested using the Chi-square test, as the data was categorical in nature, and the results revealed that, despite the challenges faced, IT sector employees are comfortable with digital payments and expect the government or banks to take steps to resolve any issues.

Keywords: Digital payments, electronic transactions, IT Sector

Introduction

A Digital payment refers to the transfer of funds between accounts using digital devices and communication protocols. This type of payment is becoming increasingly popular due to its convenience, speed, and security compared to traditional methods such as cash or checks.

With Digital payment, individuals and businesses can easily transfer funds from one account to another without the need for physical cash or checks. This can be done through a variety of digital means such as smartphones, computers, or point-of-sale systems. The transfer of funds is facilitated through communication channels such as mobile data or SWIFT, which allows for secure and efficient transactions.

Digital payments encompass a range of payment methods, including bank transfers, mobile money, credit cards, debit cards, prepaid cards, and electronic checks. Bank transfers allow for the transfer of funds between bank accounts, while mobile money enables payments through mobile devices. Credit, debit, and prepaid cards provide a convenient and secure way to make purchases and pay bills. Electronic checks are digital versions of traditional paper checks and offer similar functionality and security.

Digital Payment Methods:

The Indian government's Digital India initiative aims to empower the country's society and economy through digital means. One of its key objectives is to promote a "Faceless, Paperless, Cashless" society by encouraging the use of digital payment methods. To achieve this goal, a range of digital payment options have been made available, they are listed as under.

1. Banking Cards (Debit / Credit / Cash / Travel / Others)
2. Unstructured Supplementary Service Data (USSD)
3. Aadhaar Enabled Payment System (AEPS)
4. Unified Payments Interface (UPI)
5. Mobile Wallets
6. Banks Pre-Paid Cards
7. Point Of Sale
8. Internet Banking
9. Mobile Banking
10. Micro ATMs

Benefits of Digital Payments

Today Digital payments offer a variety of benefits to the Stakeholders like individuals, companies, governments, or international development organizations. The benefits of becoming digital include:

1. Faster, easier, more convenient
2. Economical and less transaction fee
3. Waivers, discounts and cashbacks
4. Digital record of transactions
5. One stop solution for paying bills
6. Helps keep black money under control

Review Of Literature:

Chanderprabha (2017) identifies that the Payment banks-fulsome for less cashless economy as well as for financial Inclusion This study investigates the economic influences and public sentiments that have prompted the government to plan towards a more inclusive banking system. The Central Bank of India has spurred competition among banks by authorizing a new type of bank, which offers payment, deposit, remittance, and internet banking services, but not lending. The paper endeavors to explore the potential benefits of Payment Banks on the Indian economy and its cashless initiative, as well as to bank the unbanked segment of the Indian population.

Naik , Firdous & Harika (2018) studied on role of payment banks in India – financial inclusion says that the study explores the framework of Payment Banks introduced by the RBI in 2014 for financial inclusion, which accept limited deposits and aim to reach unbanked and underbanked populations. It presents the framework, benefits, and challenges of Payment Banks, and focuses on their role in M-Banking for financial inclusion.

Rathod, Vidhyashree & Joseph (2017) studied concentrates on the transformation of the Indian economy towards a cashless system. The Reserve Bank of India has taken a crucial step in this direction by granting licenses to selected companies to establish Payment Banks. This move aims to provide financial access to underprivileged communities in remote areas. The objective of the paper is to assess the public's level of awareness regarding these IT-based banking services.

Damsgaard (2013) said that the framework for analysing digital payment as a multi sided platform The present study proposes a nascent blueprint for analysing digital payment systems and evaluating the tactics of dominant market players, including banks, mobile service providers, and merchants. An examination reveals the presence of three distinct, contactless payment systems introduced or proposed by various actors in the European marketplace. All these platforms strive to establish a strong presence by offering payment options to their existing clientele, while also expanding their current platform with additional contactless services. This transformation of traditional, single-purpose cards into multi-functional ones is an integral aspect of their strategies.

Jie, Shahrokh & Harry (2013) studied on the growth of m-payment services with the rise of smartphones. Although m-payment holds promise, the market is still developing due to a lack of agreement on standards and business models. The STOF framework is used to analyse m-payment from the perspective of banks, a key player in the ecosystem. The results indicate that the service domain is the most critical, followed by technology, organization, and finance domains. Bank representatives identify security as the most crucial issue.

Kabir, Saidin & Ahmi (2015) showed that e-payment systems are becoming a popular method of payment due to efficiency, convenience, and speed. Adoption of e-payment is growing in both developed and developing countries to simplify business transactions. The paper reviews past literature on e-payment adoption worldwide and identifies research gaps for future studies.

Thakur (2013) examined the widespread acceptance of mobile payments throughout India and the factors that influence consumers' intention to utilize mobile payment banks. The research explores the potential for full-scale adoption of mobile payments by the public in the country.

Roy & Sinha (1998) concentrated on the metamorphosis of the mobile payment services sector, which has undergone several failed attempts and holds a future of enticing but indefinite prospects, along with the likelihood of new technological innovations in payment banking services. This examination scrutinizes the present status of the mobile payment services sector through an in-depth examination of past research on mobile payments. Additionally, it delves into the various factors that shape the mobile payment services market and proposes future research directions in this ongoing, dynamic field.

Shivnami & Siwach (2017) aimed to improve digital payments in the banking sector. It covers opinions of public and private bank customers and finds that private bank customers see it as a new concept from the telecom industry, causing hesitation. Airtel Payment Banks currently offer high interest rates to attract customers and 60% believe it will aid financial inclusion and curb black money in rural areas.

Dahlberg and others (2008) focused on the transforming mobile payment services market, characterized by a past of many attempted but unsuccessful solutions and a future of exciting yet uncertain prospects with the potential for new technological advancements in payment banking services. This study examines the current state of the mobile payment services market through a comprehensive review of previous literature on mobile payments. It also analyses the various elements that influence the mobile payment services market and proposes avenues for future investigation in this continually evolving field.

Statement Of The Problem
Digital payment has made life much easier and more comfortable without any difficulties. It is more convenient for people to access payment banks since the work is done within a fraction of second. It meets the needs of the people at the specified time. It is less time consuming, reduces the risk and cost-effective payment bank is an easy mode for transaction. Still there are many risks that the people will face while using Digital Payment Methods. Hence, The study focuses on the IT sector employees who use digital payments and to know how frequently the IT sector prefer digital payment when compared to physical form.

Need For The Study
The study mainly focuses on which process does these IT sector people use digital payments whether for transaction purposes, shopping, payment of bills, discount and offers ,or for higher rate of interest they prefer these digital payments and also to find which income level of people use digital payments.

Objectives Of The Study
1. To understand the framework of digital payments.
2. To know the frequency of usage of digital payments by the IT sector employees.
3. To study the perception of digital payments on IT employees.

Hypothesis:
H0: There is no association between Age of the respondents and Digital Payments.

H1: There is an association between Age of the respondents and Digital Payments.

Type of Research: The Study is a descriptive study.

Data for the Study: The Study requires primary data and secondary data as the study is based on perception of Payments among IT Employees.

Research Instruments: Questionnaire is used to collect data from IT Employees.

Sampling Technique: Judgment Sampling

Sample Size: For the Study data required collected from the IT Employees and the sample size for the study is 200.

Limitations:
1. The study was confined to a sample size of 200 respondents.
2. The study is limited by the information and fact given by the respondents working in IT sector of different companies residing in the city of Bangalore.
3. The study cannot be generalized.

Data Analysis And Interpretation

GENDER	RESPONDENTS	Percentage
Male	58	58%
Female	42	42%

Total	100	100%

(Source: Primary data)
Table 1: Table showing gender of the respondents.

The above table indicates that there are 58% of male and 42% of females who use payment banks. It indicates that male are the major users compared to females among the 200 respondents.

AGE GROUP	RESPONDENTS	Percentage
20 and below	03	3%
20 – 25	62	62%
25 – 35	18	18%
35 – 40	11	11%
40 and above	06	6%
Total	100	100%

(Source: Primary data)
Table 2: Table showing Age Group of the Respondents.

Interpretation: The above table shows that the age group of people using payment bank services 3% of people fall under the age group of 20 and below, 62% of people fall under the age group of 20-25 ,18% of people fall under the age of 25-35, 11% of people fall under the age group of 35-40, 6% of people fall under the age group of 40 and above, it is found that the age group of 20-25 are the people are the major users of digital payment services.

Income of the respondents	Respondents	Percentage
Less than 20000	34	34%
20000 – 30000	23	23%
30000 – 40000	22	22%
40000 – 50000	12	12%
More than 50000	9	9%
Total	100	100%

(Source: Primary data)
Table 3: Table showing the monthly income of the respondent
Interpretation: It is figured out that people who earn less than 20000 are the major users of digital payment services.

	Respondents	Percentage
Friends	94	47%
Family	44	22%
Advertisement	36	18%
Commercial website	26	13%
Total	200	100%

(Source: Primary data)
Table 4: Table showing how people are aware of digital payment services

Interpretation: Among 200 respondents, 47% of the respondents are aware of payment bank services by their friends, 22% of respondents are aware by family, 18% are aware by advertisement , 13% are aware by the commercial website therefore the graph clearly identifies that more number of respondents are aware of payment bank services through their friends.

Frequency level	Respondent	Percentage
Daily	50	25%
Weekly	76	38%
Monthly	60	30%
If required	08	4%
No account	06	3%
Total	200	100%

(Source: Primary data)
Table 5: Table showing how frequently respondents use digital payment services

Interpretation: Among 100 users 25% of them use digital payment services daily , 38% of them use it on weekly bases, 30% of them use it on monthly bases, 4% of them use the services whenever there is a requirement, 3% of them do not use payment bank services.

Respondents' preferences	Weighted average	Ranking
Convenient	5.81	1
Less time consumption	5.72	2
Account number is same as mobile number	5.36	3
Cash back and discount offers	4.77	4
Digitalization	4.31	5
Higher interest rate	4.27	6
Safe and secure	3.18	7
Reduce risk	2.31	8

(Source: Primary data)
Table 6: Table showing: Reasons for opting prefer digital payments (Ranking method)

Interpretation: The above table indicates the calculation done using weighted arithmetic means to know the preference of the respondents. Opinions were ranked and found that respondents had given high level response in rank High level rank (1 – 3) where many of the respondents highly prefer digital payments for convenient purpose, less time consumption, account number is same as mobile number Average ranking is given between (4-6), where respondents preferred digital payments for cash back and discount offers, digitalization, higher interest rate. Low rank was given between the (7 – 8) where respondents preferred safe and security, reducing

risk. High ranking is given to the respondent who prefer digital payments service for their convenient purpose and less time consuming people working at IT find time scarcity henceforth this is easy of transaction for them and account number is same as mobile number. Average raking has been given to cash back and discount offers, digitalization, higher interest rate. They also expect a high return from their saving patterns. Respondents feel that payment banks reduce their risk in order to make payments, on other hand it is safe and secure when compared to real forms of cash. Liquidity is much safer.

Difficulties faced during process of transaction	Weighted average	Ranking
Unrelated advertisement	4.44	1
False deduction	4.36	2
Network issue	4.25	3
Long process to download	4.21	4
Security	4.01	5
Delay in payment	3.49	6
No response	3.21	7

(Source: Primary data)
Table 7: Table showing the difficulties faced during the process of digital payments

Interpretation: The above table indicates the calculation done using weighted arithmetic mean to know the problems faced during the process of the payment it was found the major difficulty faced by the respondent was unrelated advertisement on the page , false deduction were being made , network issue was the one among difficulties Average level – long process to download this may be because of poor connectivity and security issues this is because account can be hacked by others so secrecy must be maintained Low level – delay in payment and no responses due to incorrect password or number makes delay in payment and sometimes there are no proper information given to the customers.

Different kinds of payment apps	Respondents	Percentage
Paytm	15	7.5%
Amazon	25	12.5%
Google pay	72	36%
Jio payment	16	8%
Airtel payment	8	4%
Phone pay	56	28%
Kotak payment	2	1%
Mobile banking	2	1%
NEFT	4	2%

Total	200	100%

(Source: Primary data)
Table 8: Table showing which kind of digital payments applications do the respondents prefer

Interpretation: The above table reveals the usage of digital payment applications (Apps).

Amount transacted on payment bank	Respondents	Percentage
10000 and below	61	61%
10000 – 20000	23	23%
20000 – 30000	6	6%
30000 – 40000	5	5%
40000 – 50000	1	1%
50000 and above	4	4%
Total	100	100%

(Source: Primary data)
Table 9: Table representing the amount being transacted by the respondent.

Interpretation: The above graph represents that 61% of the respondents transact 10000 and below, 23% of the respondents transact 10000 – 20000, 6% of the respondents transact 20000 – 30000, 5% of the respondents transact 30000 – 40000, 1% of the respondent transact 40000 – 50000, 4% of the respondents transact 50000 and above it is found that most of the respondents transact 10000 and below.

Chi-Square Tests

Pearson Chi-Square	30.688[a]	16	.015
Likelihood Ratio	32.233	16	.009
Linear-by-Linear Association	1.093	1	.296
N of Valid Cases	200		

a. 20 cells (80.0%) have expected count less than 5. The minimum expected count is .06.

Interpretation: From the above table it can be analysed that the paired Chi-square test of the Age and Usage of digital Payments set there is an association between Age and Usage of digital Payment. Since the P value (.015) < 0.05 null hypothesis is rejected and alternative hypothesis is accepted.

Findings, Conclusion and Suggestions:
The study reveals that digital payments cannot be used without a traditional bank account and there is a limitation of amount on usage of payment banking but in future it may further extend based on the frequency of the usage of digital payments.

It is recommended that the digital payment system be reinforced with enhanced safety and security measures for financial transactions, made user-friendly through simplification, and have the risks associated with consumer transactions reduced. Furthermore, measures should be taken to eliminate any undue delays in its processes.

From the survey since the respondents are busy with their hectic work schedule, and they find no time for physical cash payment. Hence, there is a lot of frequency in the usage of digital transactions since the benefits of digital payment are convenience, easy transactions, less time-consuming cash back offers etc. which increases the frequency of usage of digital transactions among the respondents. Besides the benefits there are lot of

challenges for the growth of digital payment such as network issues, safety and security, false deduction, etc. overall the study identifies that despite the several challenges the IT sector employees are convenient in using digital payment and in return they are expecting the government or banks to take initiative in finding solutions to overcome the problems in usage of digital payments.

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A TREND ANALYSIS OF IMPORTS AND EXPORTS OF CUT FLOWERS FROM INDIA

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ABSTRACT
Floriculture is a subfield of ornamental horticulture that focuses on cultivating and selling flowers and other plants that are grown for their aesthetic value, as well as the art of flower arranging. Even though many flowers are grown outside in nurseries or crop fields, the industry of floriculture is commonly thought of as a greenhouse industry because flowers and potted plants are largely produced in plant-growing structures in temperate climates. This is why floriculture is also known as floriculture. In most cases, the term "floriculture" refers to both the production of bedding plants and the creation of cuttings to be grown in greenhouses or for use as houseplants indoors. Both activities are regarded to fall under the category of "floriculture." India is one of the major exporters of flowers. The Forestry business has been catching the eyes of traders, importers, and a lot of exporters. The paper is an attempt to study the changing trends in the global market to get better insights of the EXIM situation in India. The paper is descriptive in nature and data is sourced from official government records. The research concludes that in the last decade, India observed a steep rise in exports but later there was a considerable decline in the numbers. A similar trend was observed in the import of cut flowers. This shows that there has been a diminishing demand for cut flowers hampering trade and commerce of the floriculture industry.
Keywords: Cut flowers, export, import, floriculture trends.

Introduction
The cultivation of flowering and attractive plants for gardens, floristry, and everything else that is included in the floral business is the focus of floriculture, which is a subfield of horticulture. Floriculture is also the term for the farming of flowers.

Because of the huge demand for flowers not only within India but also on a global scale, the floriculture industry in India is experiencing a period of unprecedented growth and prosperity. The Flower Export business in India will quickly ascend to great heights and increase its growth all over the world in the not-too-distant future. (Vaibhav Sharma,2021)

Roses from India, particularly those grown in Bengaluru and Pune, are in high demand in the United Kingdom and Europe. According to estimates provided by the Indian Society of Floriculture Professionals, the value of flowers shipped from India to other countries is approximately 30 crores. Flower export from India reaches its peak around the holidays of Christmas and Valentine's Day, particularly for the stunning roses grown in India. Ghodawat Agro Group, which is also known for delivering three lakh stems of flowers each day to the Indian market as well as the Export market, is planning to set up a floriculture project in Goa with the intention of constructing the largest orchid farms in the world. The project will focus on floriculture.

The Floristry business has been catching the eyes of traders, importers and a lot of exporters. The paper is an attempt to study the changing trends in the global market to get better insights of the EXIM situation in India.

Literature Review
In "Design for supply chain collaboration," Simatupang and Sridharan (2008) examined supply chain collaboration architecture and offered a DfC that allows participants to construct and develop essential parts of the proposed architecture.

Mei, Zhang & Qingyu (2011) examined the nature of supply chain collaboration and its effects on firm performance. Bhinde & Hetal, (2013) in an article titled "Vibrant trends in Packaging" discussed the change in packaging trends in the floristry market and its need for sustaining in a dynamic business environment. Author discussed the various Packing methods adopted at various levels in the supply chain.

Bhinde & Hetal (2014) discussed about the awareness levels of floriculture partners amongst flower cultivators at all the supply chain partners of floriculture business. Bhinde & Hetal, (2017) discussed the challenges affecting all the supply chain partners of floriculture business.

Bhinde & Hetal, (2018) discussed about the organization and administration of floriculture business where an attempt has been made to simplify the challenges affecting floriculture business. Bhinde & Hetal, (2018) discussed problems faced by farmers in floristry business. Author gave a brief for integrating various parties associated with the supply chain and setting up a LLP company for the benefit of all the stakeholders involved in the business.

Bhinde & Hetal, (2018) summarized a model for Supply Chain Collaboration amongst partners of floristry business. A collaborative model clearly explained the benefits of collaborative supply chains for aggregating the business to fetch better market and money for farmers, retailers, and exporters as well as best quality product for end consumers. Bhinde & Hetal (2019) presented a corridor model clearly explain the benefits of collaborative business aggregation to fetch better market and money for farmers, retailers, and exporters as well as best quality product for end consumers. This business model can act as a boon to floristry business partners in near future. Bhinde & Hetal (2020) concluded that the government should provide some additional benefits to farmers to increase the trade in the coming future to balance their current losses and continue with growth of cut flowers.

Research Gap
A lot of research has been done in the past to study the trends and overall floriculture business. Few research articles highlighted the value of exports and imports of flowers from India to the global market. Yet there exists a need to study the trends observed over long durations to study the changing trends in the market to get a better understanding of the floral EXIM situation.

Materials and Methods
Objectives of the Study
To study the trends of imports and exports of cut flowers from India.

Scope of the Study
The purpose of this study is to study the trends of imports and exports of cut flowers from India. The study is limited to exports of commodity group 0603. It covers a time frame from 2009 to 2020

Sampling Techniques
The research is conducted for a time frame from 2009 to 2020. Hence sample amounts to be 12 years' data. The data is based on the latest records that are published by the government. Hence it can be noted that convenience sampling for 12 years is used.

Limitations of the Study
It covers a time frame from 2009 to 2020.
The study is limited to exports of commodity group 0603.

Type of research
The study is descriptive research which attempts to study the trends of imports and exports of cut flowers from India.

Data Collection

The research is confined to Indian context only. The research data is collected from secondary sources like websites, research papers, articles, etc.

Data Analysis

The tables below display the value and value growth (%) of imports and exports of cut flowers from India to other nations.

Sr. No.	Exports		
	Year	*Value (US $)*	*Value Growth YOY (%)*
1	2009	21856640	-10.35
2	2010	24465532	11.93
3	2011	31321721	28.02
4	2012	31175950	-0.46
5	2013	42952138	37.77
6	2014	47456887	10.48
7	2015	35310577	-25.59
8	2016	28292840	-19.87
9	2017	25539374	-9.73
10	2018	21511690	-15.77
11	2019	19350644	-10.04
12	2020	13699943	-29.20

TABLE I.   EXPORTS

Fig. 1. Annual International Trade Statistics by Country (HS02).
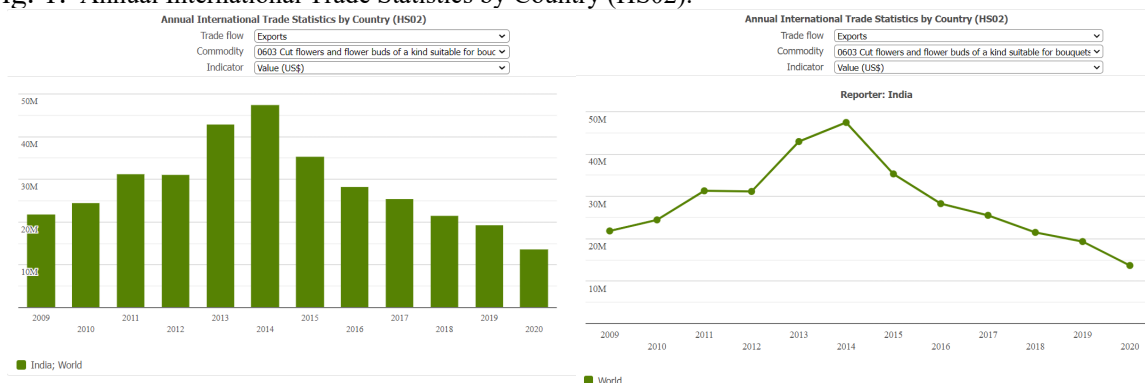
Sr. No.	Imports		
	Year	*Value (US $)*	*Value Growth YOY (%)*
1	2009	908723	4.70
2	2010	774815	-14.73
3	2011	1514187	95.42
4	2012	2201612	45.39
5	2013	5034414	128.66
6	2014	5552899	10.29
7	2015	5550578	-0.04
8	2016	4798942	-13.54
9	2017	4088263	-14.80
10	2018	3678016	-10.03

Sr. No.	Imports		
	Year	*Value (US $)*	*Value Growth YOY (%)*
11	2019	3990835	8.50
12	2020	1248314	-68.72

TABLE II.   IMPORTS

Fig. 2. Annual International Trade Statistics by Country (HS02)

The value of goods exported from the commodity category 0603, which includes cut flowers and flower buds. In the year 2020, the total amount from India was 13.6 million dollars. When compared to 2019, value-wise sales of the commodity category 0603 from India dropped by 29%. Cut flowers and flower buds saw a decrease in exports of $5.65 million over the course of 2019.

Cut flowers and flower buds accounted for 0.004% of total exports from India. Exports of commodity group 0603 when compared to 2019, the proportion of overall exports from India that were composed of the commodity group 0603 fell by 0.001 percentage points. In 2019, this proportion was 0.005%, while the total value of India's cumulative exports was $323 billion.

The value of exports of commodity group 0603 from India totaled $73 million in 2020; these exports accounted for 18.7% of the total sales of the group in India in 2020. When compared to 2019, the proportion of sales of commodity group 0603 that was contributed by exports from India decreased by 5.68 percentage points; in 2019, this proportion was 24%, and exports of commodity group from India were $79 million.

India is a major exporter of cut flowers and flower buds of a variety that is appropriate for use in bouquets or for ornamental purposes, whether they are fresh, dried, dyed, bleached, impregnated, or prepared in any other way.

The following countries are projected to be India's top export destinations for Cut Flowers and Flower Buds in the year 2020:
- The United Arab Emirates, with a portion equal to 15.8 percent (2.17 million US dollars)
- The United States of America, with a share of 13.6% (1.87 million US dollars)
- The United Kingdom, which contributed 13% (1.79 million US dollars) of the total.
- Singapore, with a ten percent share (1.38 million dollars in US currency)
- Malaysia, with 9.3% parts (1.27 million US dollars) of the pie
- Germany, which contributed 704 thousand US dollars and had a share of 5.14%
- Spain, which contributed 578 thousand dollars, or 4.22% of the total.
- New Zealand, which contributed 371,000 USD and had a stake of 2.7%
- Kuwait, which contributed 346,000 dollars, amounting to a share of 2.52%
- Nepal, which contributed 345,000 dollars, or 2.52% of the total.

The following are the principal commodity groups that will constitute India's cut flower and flower bud exports in the year 2020:
• 52% (7.19 million US$): Cut flowers and flower buds of a kind that suit, for use in bouquets and aesthetic purposes, fresh

• 47% of the market (6.5 million US dollars): 060390 - Cut flowers and flower buds.

In the year 2020, India's imports of the commodity group 0603, had a total value of $1.24 million. When compared to 2019, sales of commodity group 0603 to India experienced a value reduction of 68 percent. The value of India's imports of commodity group 0603, was $3.99 million in 2019. This represents a decrease of $2.74 million compared to 2018.

In 2020, India's imports of goods from commodity group 0603 reached 6.59% of the overall imports of the group in that year; the total value of India's imports from commodity group was $18.9 million. When compared to 2019, the proportion of imports to India that were purchases of commodity group 0603 decreased by 6.05 percentage points. In 2019, this proportion stood at 12.6%, and imports of commodity groups to India were valued at $31 million.

Finally, during India's financial year 2021, the country exported floricultural goods with a value of more than five billion Indian rupees. The United States of America and the Netherlands were the two countries that accounted for the largest shares of these exports during that particular year.

Conclusion

The research concludes that in the last decade (12 years considered in this study), India observed a steep rise in exports but later there was a considerable decline in the numbers. A similar trend was observed in the import of cut flowers. This shows that there has been a diminishing demand for cut flowers hampering trade and commerce of the floriculture industry.

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AGRICULTURAL EDUCATION REGARDING CONSTRAINTS IN THE COMMERCIAL CULTIVATION OF MEDICINAL PLANTS

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ABSTRACT
Agricultural education is a study of applied sciences and business management principles. One of the main purposes of agricultural education is to apply the knowledge and skills learned in several different disciplines to agricultural education. The medicinal plants such as Senna, Periwinkel, Gloriosa Superba, Aloevera and Coleus Forskohlii, are commercially cultivated under large areas of land in different parts of Tamilnadu. Gloriosa Superba has been cultivated as a commercial crop in Aravakurichi, Karur District since 2005. The study aims to identify the constraints experienced by the farmers cultivating Gloriosa Superba in Aravakurichi, Karur District. Primary data was collected from 186 farmers covering both small farmers and large farmers cultivating Gloriosa Superba from Velampadi, Nagampalli, Inunganur, Senthamangalam villages in Aravakurichi, Karur District. The major constraints faced by the farmers in the cultivation of Gloriosa Superba were classified into four categories such as situational constraints, financial constraints, technological constraints, and marketing constraints. The problems were ranked by the farmers by using Garett ranking technique in order to identify the most important constraint in each category. It was found from the findings that, among all the four categories, marketing constraint was identified as a key constraint faced by both small and large farmers in the study area.
Keywords: Agricultural Education, Constraints, Medicinal Plants, Gloriosa Superba, Commercial Cultivation

Introduction

Agricultural education is a study of applied sciences and business management principles. One of the main purposes of agricultural education is to apply the knowledge and skills learned in several different disciplines to agricultural education. Agricultural education focuses on various subjects pertaining to horticulture, forestry, conservation, natural resources, agricultural products and processing, production of food and fiber, aquaculture and other agricultural products, mechanics, sales and service, economics, marketing, and leadership development. Agricultural education programs assist with providing lifelong learning opportunities in and about agriculture. Agricultural education provides opportunities to learn basic agricultural skills and knowledge, occupation training and retraining, and professional growth and development.

Basically, all plants have potential medicinal value. However, in practice, a plant is considered medicinal only when its medicinal properties or applications are in use by some system of medicine. The Cultivation of medicinal plants ensures several opportunities for developing countries to improve the well-being of their rural communities. Medicinal crops/plants are found to be the natural product of many developing countries which could be sold at attractive prices in the world market. The increasing demand for more herbal ingredients throughout the world creates opportunities for the collection and commercial cultivation of medicinal plants. These endeavors could increase rural employment opportunities in developing countries and improve the market around the world in relation to the healthcare of millions of people.

The commercial cultivation of medicinal and aromatic plants entered the Indian agricultural system in terms of two different aspects. First, the increasing demand and preference of the people towards traditional health practices such as Siddha, Ayurveda and Unani particularly due to lower side effects and lower expenses pave the way to commercial cultivation of medicinal and aromatic plants. Second, the plants and herbs can also be collected from the natural habitat under a less supervised environment.

Tamilnadu has endowed with numerous medicinal crops and the state occupies a greater share in the production and export of 50 plus medicinal plants. As far as the market for medicinal plants was concerned, certain herbs with commercial significance namely Senna, Periwinkle, Gloriosa Superba, Coleus and Dhavanam are cultivated under large acres of land. Senna and Periwinkle have been cultivated under more than 5,000 hectares, followed by Gloriosa Superba has been cultivated under 3,800 hectares and Dhavanam and Coleus are cultivated under 2000 and 320 hectares respectively.

The areas such as Darapuram, Aravakurichi, Dindigul, K. Paramathi, Oddanchatram, Markampatti and Moolanur are identified for the commercial cultivation of Gloriosa Superba. The commercial significance of the crop are subject to fluctuation because of drastic reduction in the price of seeds and increasing cost of

cultivation over the years. The price of seeds is subject to variation between Rs.1,500, Rs.2,000 and Rs.2,500 and sometimes it might reduce to Rs.800 per kg. Besides price fluctuation, there are many other difficulties associated with the cultivation of the crop such as high cost of rhizomes, climatic conditions and involvement of middlemen in the price fixation and so on. Hence, an attempt is made in this study to identify the various constraints experienced by the farmers in the cultivation of Gloriosa Superba in Aravakurichi area.

Objectives of the Study
The main aim of the study is to identify the constraints faced by the farmers in the cultivation of Gloriosa Superba in Aravarakurichi Block, Karur District.

Review of Literature
There are some research papers related the topic in the literature. Ranjith and Rohini (2019) studied the economic benefits from the cultivation and marketing of Gloriosa Superba in Dindigul District, Tamilnadu. Sati (2013) studied the possibilities of the cultivation of medicinal plants and its contribution to the enhancement of livelihood of the farmers in the Central Himalaya. Olsen and Helles (2009) examined the efficiency of the market and distribution of returns in Nepal and India Medicinal plant market. Gogoi (2009) tried to analyze the economics of patchouli cultivation in Assam. Van Andel and Havinga (2008) in their study tried to test whether commercial cultivation of medicinal plants was a destructive activity in Suriname, South America. Kala (2006) analyzed the problems and prospects in the conservation of medicinal plants sector in Northern India.

Methodology
Aravakurichi has been chosen as the study area because it was noted that the large number of farmers were engaged in the commercial cultivation of Gloriosa Superba. Primary data was collected from 186 farmers covering both small and large farmers cultivating Gloriosa Superba from Velampadi, Nagampalli, Inunganur, Senthamangalam villages in Aravakurichi block, Karur District. The problems were ranked by the farmers by using Garett ranking technique in order to identify the most important constraint in each category. The constraints faced by the farmers were classified into four different categories i.e., situational constraints, financial constraints, technological constraints and marketing constraints.

Data Analysis and Discussion
The various constraints faced by the farmers were discussed in this section. Table 1 shows the various situational constraints involved in the cultivation of Gloriosa Lilly/Superba and they were ranked using Garett Ranking Technique.

| No | Difficulties Faced | Gloriosa Superba | | | |
| | | Small Farmers | | Large Farmers | |
		Mean	Rank	Mean	Rank
1.	Irregular supply of electricity	31.16	7	60.94	5
2.	Inadequacy of water for irrigation	44.70	6	63.54	4
3.	Lack of agricultural labour	78.02	1	86.57	1
4.	Non-availability of good farm yard manure	60.63	3	58.85	6
5.	Non-availability of contact office near to village	52.90	5	40.10	7
6.	Biased treatment from the officials	28.74	9	25.00	8
7.	Scarcity of fertilizer in the market	68.84	2	70.31	3
8.	Regional politics faced by the farmers in the study area	29.71	8	18.23	9
9.	Climatic Conditions	55.31	4	84.38	2

Table 1: Situational Constraints Experienced by the Farmers

Among the nine situational constraints that exist in the cultivation of Gloriosa Superba, lack of agricultural laborers was the first and most important constraint faced by both small and large farmers. Scarcity of fertilizer in the market was the second and non-availability of good farm manure was the third important problem faced by the small farmers while climatic conditions in the study area and scarcity of fertilizer in the market was the second and third most important problem faced by the large farmers in the cultivation of Gloriosa Superba in the study area.

The major financial constraints existing in the cultivation of Gloriosa Superba were shown in Table 2. Small farmers cultivating Gloriosa Superba expressed that high cost of planting material was the major financial constraint faced in the cultivation process. Most of the farmers in the study area are purchasing rhizomes from the agents to plant it. The agents charge Rs. 400 to Rs.500 per kg of rhizome. Tedious procedure for getting a loan was the second and lack of funds was the third important financial constraint faced by them while large farmers expressed that high cost of planting material, high cost of fertilizers and pesticides were the other three major financial constraints faced by the farmers.

No	Difficulties Faced	Gloriosa Superba			
		Small Farmers		Large Farmers	
		Mean	Rank	Mean	Rank
1.	High cost of pesticides	40.75	5	51.50	3
2.	High cost of fertilizers	45.75	4	53.75	2
3.	High cost of planting material	71.25	1	65.5	1
4.	Tedious procedure for getting loan	53.5	2	42	5
5.	Payment in installments for the purchased produce	38.75	6	41.5	6
6.	Lack of Funds	50	3	46.5	4

Table 2: Financial Constraints Faced by the Farmers

Table 3 shows the technological constraints faced by the farmers cultivating Gloriosa Superba in the study area. Lack of technical assistance was the major technological constraint faced by the small farmers cultivating Gloriosa Superba and lack of knowledge about the spraying pesticides/ insecticides and lack of knowledge about cultivation practices were the second and third important constraints faced by the farmers. In the case of large farmers, lack of training at village level was the major technological constraint followed by lack of technical assistance and lack of knowledge about cultivation practices were the second and third important constraint experienced by them in the study area.

No	Difficulties Faced	Gloriosa Superba			
		Small Farmers		Large Farmers	
		Mean	Rank	Mean	Rank
1.	Lack of knowledge about spraying of insecticides	62.5	2	43.85	4
2.	Lack of awareness about external support available	45.83	5	25	5
3.	Lack of training at village level	50	4	65.3	1
4.	Lack of technical assistance	66.67	1	54.17	2
5.	Lack of knowledge about cultivation practices	58.33	3	45.5	3

Table 3: Technological Constraints Faced by the Farmers

No	Difficulties Faced	Gloriosa Superba			
		Small Farmers		Large Farmers	
		Mean	Rank	Mean	Rank
1.	Lack of awareness about market information	63.00	2	66.88	2
2.	Price fluctuations	60.91	3	72.63	1
3.	Lack of storage capacity/ delay in crop cutting from the sugar company	52.61	4	46.50	6
4.	Weighing problem	47.17	6	49.29	4
5.	Unauthorized deductions	38.26	8	43.25	7
6.	Exploitation by middlemen	63.74	1	65.50	3
7.	Unregulated market	31.30	9	47.04	5
8.	High cost of transportation	45.30	7	33.83	8
9.	Delay in payment	48.52	5	25.88	9

Table 4: Marketing Constraints in the Cultivation of Gloriosa Superba

As far as the marketing of the produce was concerned, exploitation by middlemen, lack of awareness about market information and price fluctuations were the three important problems incurred by the small and large

farmers cultivating Gloriosa Superba. Delay in payment, unregulated market, unauthorized deductions, high cost of transportation, inability of storage were the other important marketing constraints incurred by the farmers. The marketing constraints play a very important role in the reduction of the economic benefit of the farmers. In case of price fixation, the intermediaries determine the price for the produce. The farmers are only the price takers. The middlemen/Intermediaries exploit the farmers in numerous ways i.e., fixation of lower price, false measurements, delay in payment etc.

Hence, exploitation by middlemen and price fluctuations were the important marketing constraints experienced by the farmers cultivating Gloriosa Superba in the study area.

S.No	Particulars	Small Farmers	Rank	Large Farmers	Rank
1.	Situational Constraint	43.75	3	57.14	2
2.	Financial Constraint	56.25	2	42.86	3
3.	Technological Constraint	39.58	4	42.86	4
4.	Marketing Constraint	60.42	1	60.71	1

Table 5: Various Constraints Incurred by the Farmers

Table 5 shows that among various constraints, marketing was the major constraint faced by both small and large farmers in the study area. Financial constraint was the second important problem next to marketing and situational constraint was the third and technological constraint was the fourth important problem faced by the small farmers cultivating Gloriosa Superba. In the case of large farmers, situational constraint was ranked as the second important constraint; financial constraint was the third and technological constraint was the fourth important constraint incurred by the farmers in Karur District.

Conclusion

Agricultural education is a study of applied sciences and business management principles. One of the main purposes of agricultural education is to apply the knowledge and skills learned in several different disciplines to agricultural education. The study found that lack of agricultural labor, cost of planting material, lack of training to farmers, lack of technical assistance, price fluctuations and exploitation by middlemen were the most important constraints experienced by the farmers in the cultivation of Gloriosa Superba. It was also identified that among the various constraints, marketing was the key constraint experienced by the farmers in Aravakurichi. Hence, it is suggested that the Government should create a better marketing channel for the produce of Gloriosa Superba to make the cultivation more beneficial. The Horticulture department in the block provides various assistance to the farmers. But, these benefits were not reaching all the farmers in the study area due to various lapses prevailing in the administrative system.

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AN ANALYTICAL STUDY ON CUSTOMERS BUYING BEHAVIOUR TOWARDS ELECTRIC CARS IN MUMBAI REGION

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ABSTRACT

Given the current situation, the government's increases in fuel prices, as well as the significant environmental damage caused by fuel-based vehicles, it is clear that these factors must be taken into consideration. We may observe these indirect effects on nature, which cause a-climatic shifts among other things.

The best way to solve the issue is to turn on an electric vehicle. But choosing the right car is crucial because the producers of electric cars have only just begun to provide a limited selection. Before purchasing an electric vehicle in particular, customers take into account a number of considerations. Therefore, this study examines the variables that influence consumer choices for electric vehicles. Although switching to electric cars instead of conventional ones is the best option currently on the market. There is insufficient infrastructure and facilities in India for electric vehicles. The offerings are also constrained and quantifiable.

Additionally, businesses are promoting their electric vehicles and taking all reasonable steps to help and support them. Even if the number of owners of electric cars is growing steadily and day by day, some still hesitate to purchase one. Because every consumer has different needs, this evolution cannot be realised without proper infrastructure and other conditions.

Keywords: Electric car, Battery operated car, EV, Electronic, Consumer purchase decision making.

Introduction

Day by day population growth creates a challenge for expanding transportation options. In general, a household with disposable income and the means to do so has an automobile. People increasingly choose having their own private vehicle over using public transportation, thanks in part to the pandemic. Additionally, many people buy cars only for fun and collection purposes to uphold their social class standard.

The growth in cars is having some very evident negative effects, including greenhouse gasses, more pollution, higher fuel prices, and global warming. Therefore, buying an electric automobile instead of a fuel-based car is an alternative to reduce this issue.

This study is being conducted to learn how individuals feel about purchasing electric vehicles. However, it is difficult for a nation like India to choose electric vehicles with ease, though this idea of electric vehicles can be implemented with some refinement. There are still some people who believe that gasoline-powered vehicles are the finest. The machine's scream and engine surge make them feel physically alive. Many individuals believe that electric vehicles are impractical and cannot fully replace vehicles powered by fuel. However, for the time being, that can also be considered due to the lack of charging stations and the proper services, among other things. However, this evolution will happen gradually because it is necessary for the time being. Humans and technology are both changing. Due to resource constraints, fuel-based vehicles have no place in the future; instead, electric vehicles are the way of the future.

Review of Literature

According to author Agrawal, (2020) European drivers toward electric vehicles, CO2 emissions from consumer vehicles are increasing daily because there is no way to lower them. The only alternative is the development of electric vehicles. This study makes it possible to learn how people feel about electric cars. It investigates the elements that set new cars apart from standard vehicles that customers value when purchasing one. For car drivers, cost and range are less important than performance. This study demonstrates that car owners should think seriously about switching to electric vehicles.

Trivedi. (2020) says that investigating the factors influencing consumer purchase intention for electric cars: an emerging market perspective. The said research explores factors influencing Indian consumers' attitude towards brand of electric cars and brand love and buying of electric cars. Brand love affects more than brand attitude in the final purchase decision of a car. The relationship between brand love and attitude is also established here.

It is difficult to forecast the sales of electric vehicles because they haven't yet attained their right market share on a global scale. This study includes every aspect that is essential for forecasting the sales of electric vehicles in India.

Bimbraw (2015) investigated Autonomous cars: Past, Present and future a review of the developments in the last century, the present scenario and the expected future of autonomous vehicle technology. The said research paper helps in understanding the trends in autonomous vehicle technology in past, present and future. As per the era the cars have evolved according to the needs and went up-to the luxurious feel which human beings can ever imagine. Various features have been introduced. And it is predicted that most of the autonomous vehicles will be launched in the next decade. The future is an ambitious era and safe and comfortable transport.

Bimbraw (2015) reviews the advancements over the course of the last century, the current situation, and the anticipated future of autonomous vehicle technology in his research work, Autonomous cars: Past, Present, and Future. The research paper aids in comprehending past, present, and future tendencies in autonomous vehicle technology. According to the time, cars have evolved to meet necessities and have reached the highest level of luxury a person can conceive of. Many new features have been added. Most autonomous vehicles are expected to be introduced within the next ten years. Future transportation will be secure and comfortable.

The price of electric vehicles, their acceptance by consumers, and their impact on the profitability of businesses that sell electric vehicles are the primary problems of electric vehicles, according to the author Soulopoulos, (2017). in his study paper on when they will be less expensive than conventional automobiles. For the foreseeable future, both the price for end users to purchase battery-operated automobiles and the cost of manufacturing them may be higher than for regular conventional cars.

Research Gap
The respondents to this survey will include those who now possess electric cars, those who are considering purchasing an electric vehicle as their first vehicle, and those who currently own fuel-based vehicles who are considering purchasing an electric vehicle as a secondary vehicle in Mumbai. Since there are now only a few companies producing electric automobiles, after-sale service is one of the main problems.

Before purchasing an automobile, most individuals prioritize upkeep. Battery guarantee is also very important because batteries are the lifeblood and heart of electric vehicles. If manufacturers are unable to offer appropriate battery warranties, then their products are useless. People have been compelled to use their personal vehicles due to the global epidemic and the skyrocketing cost of gasoline.

The speed at which an electric car charges is particularly important because it might negatively affect the customer's experience if it takes too long. A decent charging standard and battery life should coexist in harmony.

Assistance and failure. What support the consumers will receive if an electric car gets into a challenging scenario in the middle of the road is also a concern.

Objectives
Factors influencing how customers see buying electric cars.

Research Methodology
The goal is to understand what influences consumers when they are considering purchasing an electric vehicle. This study takes into account a wide range of variables, including battery warranty, monthly driving distance, breakdown, convenience, environmental friendliness, pricing, comparison to conventional cars, etc. the important distinctions between the independent and dependent variables. It is a descriptive research technique. We created a structured questionnaire and used a google survey form to collect responses from a total of 150 respondents (both consumers who now own electric cars and those who are interested in purchasing one).

In this study, a conceptual attempt has been made to comprehend the influences on consumers' decisions to buy electric cars. We have used descriptive statistics to perform crosstabs with Chi square and Phi. We have contrasted the dependent variables with each of the independent factors separately. Our understanding of the framed hypothesis is gained using tests. Additionally, we learned the means of all the dependent variables through descriptive statistics, as well as what influences electric car buying decisions the most.

Research method used for this study is quantitative. Researchers identified descriptive research design suitable for the study. The sample size selected for the study is 150. SPSS 21 is used for statistical analysis.

Data analysis using SPSS
The Reliability Test

onbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.636	.546	23

Table 1 Reliability Statistics
Reliability Statistics

Since the Cronbach's Alpha value is more than 0.5 i.e., 0.636 and Cronbach's Alpha based on standardized items is 0.546. So, it shows that, the data is significant.

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
65.43	46.314	6.805	23

Table 2 Scale Statistics
Scale Statistics

From the above table we can infer that the mean of our study is 65.43, where variance is found out to be 46.314, standard deviation of our study is 6.805.

ANOVA

		Sum of Squares	df	Mean Square	F	Sig
Between People		300.036	149	2.014		
Within People	Between Items	4677.283	22	212.604	290.295	.000
	Residual	2400.717	3278	.732		
	Total	7078.000	3300	2.145		
Total		7378.036	3449	2.139		

Grand Mean = 2.84

Table 3 ANOVA
ANOVA Table
From above this ANOVA table, we can infer that the F value is 290.295 and sig is 0.000 and the grand mean is 2.84.

Hypothesis Testing –
Hypothesis 1 –
Ho1 - There is no significant impact of Monthly driving Mileage and power and torque on consumers perception towards buying electric cars.
Ha1 - There is a significant impact of Monthly driving Mileage and power and torque on consumers' perception towards buying electric cars.

What is your monthly driving mileage? * Will electric cars provide more power and torque than conventional cars?

| | | | Will electric cars provide more power and torque than conventional cars? | | |
			Yes	No	Total
What is your monthly driving mileage?	Below 500 km	Count	18	23	41
		Expected Count	22.1	18.9	41.0
	500 km - 1500 km	Count	28	21	49
		Expected Count	26.5	22.5	49.0
	1501 km - 3000 km	Count	19	15	34
		Expected Count	18.4	15.6	34.0
	3001 km - 5000 km	Count	8	9	17
		Expected Count	9.2	7.8	17.0
	5000 km & Above	Count	8	1	9
		Expected Count	4.9	4.1	9.0
Total		Count	81	69	150
		Expected Count	81.0	69.0	150.0

Table 4 Cross Tabulation
Cross Tabulation

Hypothesis 2 –
Ho2 - There is no significant relationship between types of batteries and capacity and warranty of battery on consumers' perception towards buying electric cars.
Ha2 - There is a significant relationship between types of batteries and capacity and warranty of battery on consumers' perception towards buying electric cars.

| | | | Does type of battery and its capacity impact your decision of buying an electric car? | | |
			Yes	No	Total
On a scale of 1 to 5, below mentioned points make significant impact on your purchase decision of electric vehicle? (1 being the lowest and 5 being the highest) [Warranty of Battery]	Very Low	Count	1	1	2
		Expected Count	1.3	.7	2.0
	Low	Count	0	1	1
		Expected Count	.6	.4	1.0
	Neutral	Count	16	19	35
		Expected Count	21.9	13.1	35.0
	High	Count	32	23	55
		Expected Count	34.5	20.5	55.0
	Very High	Count	45	12	57
		Expected Count	35.7	21.3	57.0
Total		Count	94	56	150
		Expected Count	94.0	56.0	150.0

Table 5 On a scale of 1 to 5, below mentioned points make a significant impact on your purchase decision of electric vehicle? (1 being the lowest and 5 being the highest) [Warranty of Battery] * Does the type of battery and its capacity impact your decision of buying an electric car? Cross Tabulation
Crosstabulation

Hypothesis 3 –
H0 - There is no significant impact of charging specification and Infrastructure on consumer perception towards

buying electric cars.
H3 - There is a significant impact of charging specification and Infrastructure on consumer perception towards buying electric cars.

Do you agree with the following parameters? (5- Strongly Agree, 4- Agree, 3- Neutral, 2- Disagree, 1- Strongly Disagree) [Whether maintenance infrastructure is well developed?] * Would you like to have charging specifications such as Super-Fast charging at your home also than only in selected showrooms?

| | | | Would you like to have charging specification such as Super-Fast charging at your home also than only in selected showrooms? | | |
			Yes	No	Total
Do you agree with the following parameters? (5- Strongly Agree, 4- Agree, 3- Neutral, 2- Disagree, 1- Strongly Disagree) [Whether maintenance infrastructure is well developed?]	Strongly Disagree	Count	9	2	11
		Expected Count	9.0	2.0	11.0
	Disagree	Count	16	5	21
		Expected Count	17.2	3.8	21.0
	Neutral	Count	26	8	34
		Expected Count	27.9	6.1	34.0
	Agree	Count	36	6	42
		Expected Count	34.4	7.6	42.0
	Strongly Agree	Count	36	6	42
		Expected Count	34.4	7.6	42.0
Total		Count	123	27	150
		Expected Count	123.0	27.0	150.0

Table 6 Cross tabulation
Cross Tabulation

Hypothesis 4 –
H0 - There is no significant relationship between environment friendly and price on consumer perception towards electric cars.
H4 - There is significant relationship between environment friendly and price on consumer perception towards electric cars.

On a scale of 1 to 5, below mentioned points make significant impact on your purchase decision of electric vehicle? (1 being the lowest and 5 being the highest) [Environmental Friendly] * Do you agree with the following parameters? (5- Strongly Agree, 4- Agree, 3- Neutral, 2- Disagree, 1- Strongly Disagree) [Can electric cars save money?]

| | | | Do you agree with the following parameters? (5- Strongly Agree, 4- Agree, 3- Neutral, 2- Disagree, 1- Strongly Disagree) [Can electric cars save money?] | | | | | |
			Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Total
On a scale of 1 to 5, below mentioned points make significant impact	Very Low	Count	0	1	1	1	0	3
		Expected Count	.0	.1	.9	1.0	.9	3.0

on your purchase decision of electric vehicle? (1 being the lowest and 5 being the highest) [Environmental Friendly]	Low	Count	0	1	4	0	0	5
		Expected Count	.0	.2	1.5	1.7	1.5	5.0
	Neutral	Count	0	3	8	13	5	29
		Expected Count	.2	1.4	8.5	10.1	8.9	29.0
	High	Count	1	2	20	17	14	54
		Expected Count	.4	2.5	15.8	18.7	16.6	54.0
	Very High	Count	0	0	11	21	27	59
		Expected Count	.4	2.8	17.3	20.5	18.1	59.0
Total		Count	1	7	44	52	46	150
		Expected Count	1.0	7.0	44.0	52.0	46.0	150.0

Table 7 Crosstabulation
Cross Tabulation

Hypothesis 5 –
H0 - There is no significant impact of after sale services and maintenance cost on consumer perception towards buying electric cars.
H5 - There is a significant impact of after sale services and maintenance cost on consumer perception towards buying electric cars.

			On a scale of 1 to 5, below mentioned points make significant impact on your purchase decision of electric vehicle? (1 being the lowest and 5 being the highest) [After sale service]				
			Low	Neutral	High	Very High	Total
On a scale of 1 to 5, below mentioned points make significant impact on your purchase decision of electric vehicle? (1 being the lowest and 5 being the highest) [Maintenance cost]	Very Low	Count	1	0	0	0	1
		Expected Count	.0	.2	.3	.4	1.0
	Low	Count	0	4	0	0	4
		Expected Count	.1	.9	1.3	1.7	4.0
	Neutral	Count	2	12	12	10	36
		Expected Count	1.0	8.4	11.3	15.4	36.0
	High	Count	0	17	23	22	62
		Expected Count	1.7	14.5	19.4	26.5	62.0
	Very High	Count	1	2	12	32	47
		Expected Count	1.3	11.0	14.7	20.1	47.0
Total		Count	4	35	47	64	150
		Expected Count	4.0	35.0	47.0	64.0	150.0

Table 8 On a scale of 1 to 5, below mentioned points make a significant impact on your purchase decision of electric vehicle? (1 being the lowest and 5 being the highest) [Maintenance cost] * On a scale of 1 to 5, below mentioned points make a significant impact on your purchase decision of electric vehicle? (1 being the lowest and 5 being the highest) [After sale service] Cross Tabulation
Cross Tabulation

Hypothesis 6
H0 - There is no significant impact of breakdown and convenience on consumer perception towards buying electric cars.
H6 - There is a significant impact of breakdown and convenience on consumer perception towards buying electric cars.

Do you feel that electric cars are more convenient than fuel-based cars? (1 - Least Convenient, 2 - Slightly Convenient, 3 - Moderately Convenient, 4 - Convenient, 5 - Most Convenient) * Does electric cars breakdown more easily than conventional fuel-based cars?

			Does electric cars breakdown more ventional fuel-based cars?		
			Yes	No	Total
Do you feel that electric cars are more convenient than fuel- based cars? (1 - Least Convenient, 2 - Slightly Convenient, 3 - Moderately Convenient, 4 - Convenient, 5 - Most Convenient)	Slightly Convenient	Count	5	3	8
		Expected Count	5.1	2.9	8.0
	Moderately Convenient	Count	20	10	30
		Expected Count	19.0	11.0	30.0
	Convenient	Count	55	27	82
		Expected Count	51.9	30.1	82.0
	Most Convenient	Count	15	15	30
		Expected Count	19.0	11.0	30.0
Total		Count	95	55	150
		Expected Count	95.0	55.0	150.0

Table 9 Cross tabulation
Cross Tabulation

Results and Discussion
This study's goal is to clarify the variables that influence consumers' perceptions about buying electric cars. People take into account a variety of aspects when purchasing automobiles, especially electric ones, including the type of battery, its capacity, and its warranty, as well as after-sale services, maintenance costs, the car's pricing, the car's range, and many other things. Currently, the necessary infrastructure is insufficient, making it more challenging for consumers to acquire electric vehicles. However, given the modifications and alterations in customer perception of electric automobiles, consumers may choose electric cars in the upcoming years.
Additionally, people are being forced to switch to electric automobiles in order to be more environmentally and financially sustainable due to rising fuel prices, pollution levels, and prices of conventional cars. These vehicles offer the final users adequate power and torque. The government also offers road tax credits after purchasing these vehicles, which encourages users to choose electric vehicles. After considering everything, we may conclude that although this transformation is unavoidable, it will happen gradually.

Our findings demonstrate that before purchasing an electric vehicle, customers have various perceptions. According to their own usage and habits, a large number of respondents joined in and shared their opinions on the various factors. Although the environment is a huge problem nowadays, our study shows that the majority of individuals are still hesitant to purchase an electric automobile as of right now. According to the entire study, we received 150 responses, of which 46 people want to purchase electric vehicles as soon as possible, 52 people are still debating their options and planning to do so in the next five years, 36 people are going to purchase one in the next ten years, and 16 people out of 150 do not. Through this research, we have discovered that customers prioritize mileage when deciding whether to purchase an electric vehicle, regardless of their age or line of work. 110 respondents—out of 150—believe that an electric car's mileage will determine whether they purchase it.

Conclusion

The respondents from whom we collected the data are mostly in the 25–34 age group (54.7%), followed by the 35–44 age group (16.7%), the 45–54 age group (17.3%), and the 55+ age group (11.3%). 34.7% of those who responded to our survey said they would like to buy an electric car within the next five years, while 30.7% said they would like to buy an electric car as soon as possible. There were 24% and 10.7% of respondents who wanted to buy an electric automobile in the next ten years, respectively. People who are salaried make up 48% of replies, demonstrating that consumers with extra money are likely to buy electric cars.

Consumers are still hesitant to drive electric cars on long trips, as evidenced by the 27.3% of respondents who drive less than 500 km per month, 32.7% who drive between 500 and 1500 km, 22.7% who drive between 1500 and 3000 km, 11.3% who drive between 3001 and 5000 km, and 6% who drive more than 500 km per month. Driving range appears to be a key element, with 73.3% of respondents citing mileage as a critical consideration when purchasing an electric vehicle and 26.7% saying it had no bearing on their decision. 37.3% of respondents said they were not concerned about the battery's capacity, compared to 62.7% of respondents who were.

SUV is the preferred car type, with Hatchback, Sedan, and Sports receiving 32.7%, 26.7%, 28%, and 12.7% of the vote, respectively. 82% of individuals demand lightning-fast charging at home, while only 18% were unconcerned about it. Compared to 46% of respondents who disagree, 54% of respondents think electric automobiles will have higher torque and power. 63.3% of respondents believe that electric automobiles will break down quickly, whereas 36.7% believe the opposite.

When compared to conventional cars, we can observe that 20% of respondents find them to be the most convenient, followed by 54.7%, 20%, 20% medium handy, 5.3% slightly convenient, and 0% least convenient.

Future Scope

By analyzing the aforementioned findings, we can suggest that the electric car industry has to develop and mature significantly more in order to provide suitable infrastructure and service facilities. Although fewer people are choosing electric automobiles, those who do should be made aware of the advantages of these vehicles and how they can effectively replace conventional fuel-based vehicles. Governments should also support the use of electric vehicles.

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AN EMPIRICAL STUDY ON INFLUENCE OF COVID19 ON SUPPLY CHAINS OF INDIAN INDUSTRY

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ABSTRACT

This study and research are an endeavour to present and understand the impact of the COVID19 pandemic on the Supply Chain Management of Indian industry. The supply chain of the industry is the backbone of its efficiency, effectiveness, productivity, service-commitment and the cost management. The whole industry thrives on the connectivity of the supply chain and inter-woven effect. It creates an ecosystem of hierarchy of suppliers, their business models, their integration into servicing the consumer and in the bargain serving the society through generation of employment and setting self-propelling motion in the economic cycle. The pandemic of COVID 19, not only brought to halt the whole economic activity in the country but it also exposed the industry to the vagaries of such inter-woven supply chains. Industry had built this supply chain with unidirectional focus on the benefits such integration can generate. The pandemic exposed the hidden face of the havoc such integration could have on the industry, especially so when the lockdowns extended for longer periods and the re-start hasn't been as homogenous across geographies, as the lockdown was. This paper showcases the effects of a pandemic of this magnitude on the supply chains, the potential mitigation strategies, the model of resilient digitally connected supply networks of the future and precipitates a discourse on why the industry should rethink and challenge its best practices in the light of disruption COVID19 has created. **Keywords**: Supply chain management, manufacturing, operations, productivity, efficiency, COVID19, resilience, vulnerability, disruption.

Introduction:

COVID19 has struck the world like a bolt-from-blue. A pandemic, which swept across the globe in no time and decimated the bold & mighty nations equally as the weak & timid, is unparalleled in modern history. The pace of the sweep has been so magnificent that nobody could even react or prepare for it. The economies of the world, with the unique exception of China, have come to a stand-still.

The coronavirus (much before it was declared pandemic) heralded itself in January 2020 (at least officially), when during the Spring festival holidays in China, the province of Hubei reported the news of spread of a dangerous virus, which engulfed the local population like wildfire. The epicentre of this spread was the municipal limits of Wuhan. The first containment action from the Chinese government was extension of the Spring festival holidays by two weeks nationwide and gradually starting the economic activities from mid-February only, with exclusion of Hubei province in this restart. These three weeks created the first panic in the manufacturing world. China has been the world's factory for different types of raw materials, sub-components, components, assemblies, tools, equipment, machines. Just to draw a perspective to China's stakes in the modern world, in 2003 when SARS hit mainland China, it contributed only 3% of global GDP. As of today, China's share of global GDP is 17-20%, making it one of the main centres of the global economy. When the supply chain did not start after the usual one-week break of spring festival, the global supply chain started to feel starved and gradually suffocated.

Manufacturing industry from Mexico to Korea has been dependent on the China factory for over two decades now. But this was the first time that the pipeline had seen a major disruption. On March 11, 2020, the Institute for Supply Management (ISM) released the first results of its survey focused on the impact of COVID19 on the supply chains and the business. The results showed that overwhelming 75% of the companies reported some sort of supply chain disruptions due to the transport restrictions. Over 44% of respondents to the survey acknowledged that they had no plan-B in place for supply disruptions from China. Around 53% respondents reported facing difficulty in receiving supply chain information from China.   Almost 16% organisations had already downgraded their revenue targets by 5.6% due to this virus impact.

However, this disruption was short, and restart was the good news. Hubei province was an important part of this supply chain but alternatives from the rest of China were not unknown. The industry sort of started to relax, thinking the worst was over. However, within a matter of next two to three weeks, the virus showed its ugly face in the other parts of the world, including Korea, Europe, US, Middle East, Australia, Rest-of-Asia. The spread was almost akin to forest fire fuelled by the high-speed winds and high temperatures. Governments, one after the other, started to lock down their nations and isolate themselves. This time the receiver side of the supply chain started to starve the supply side. But the impact was still the same, the supply chain of the manufacturing industry had been disrupted. The world acknowledged the power and existence of the virus by declaring it as pandemic. COVID19 brutally exposed the vulnerabilities of the global supply chain strategies followed by industry, which had been too focused on efficiency, low inventory buffers and minimization of costs as the key drivers of consolidation and leaner supply chains. This narrow focus had been devoid of any measures of de-risking the ultra-globalised supply chains, which now lay exposed with shortages precipitated due to this virus.

After almost eight to ten weeks of the isolation and stop of all economic activities, governments across the globe were forced to rethink. Depending on their capacities and the deterrents they could create in terms of the preventive measures and information campaigns, the governments began to realise that economic activity needed to restart, and their resistance began to give-away. For the manufacturing sector, in this step from governments, there was an optimism mixed with scepticism, optimism as the economy prepared to graduate to normalcy; scepticism as the challenges of re-establishing the supply chain occupied centre-stage in all the strategic discussions. Any chain is as strong as its weakest link, and supply chains are no exception. Manufacturing sector, as it prepared to restart, was worried about such weakest links in their supply chain. One of the key questions is what if the bullwhip effect strikes the industry? A lot of vigilance will be required as the industry moves forward, to ensure the right priorities are in place whilst filling the supply chains.

The COVID-19 pandemic is a Black Swan event and lessons need to be learnt from such events very quickly. The industry must recognize this factor and quickly manoeuvre to a new position, as it limps out of this economic shattering event. The first actions would be towards creating the resilient and in-vulnerable supply chains post this crisis. The directions which are evolving are leading businesses towards departure from linear supply chains towards digital supply networks, the connected world which provides end-to-end visibility of full supply chain, enabling greater agility, optimization, responsiveness and resilience through efficient risk management and effective anticipation of disruptions.
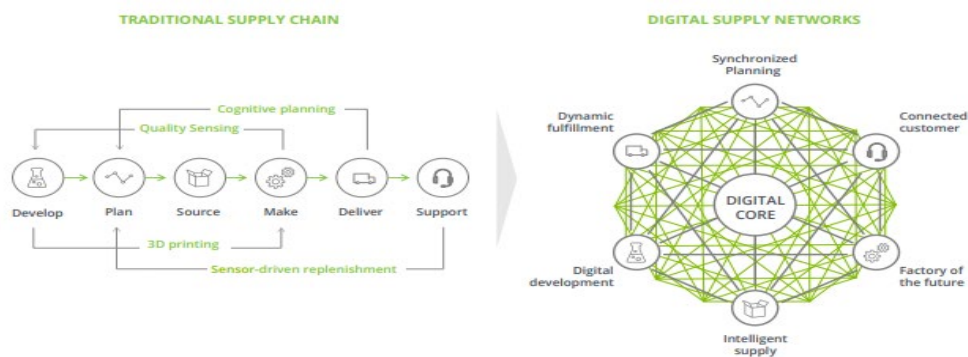
Figure 1: Traditional Supply Chain versus Digital Supply Networks (Courtesy: Deloitte) [5]

The obvious element of human vulnerability will be the key focus and interventions would be driven by reducing human dependency through the core digital technologies of Industry 4.0. Whatever be the recourse, the current situation will precipitate the acceleration of the digitization and technology-driven global digital transformation endeavours will gain priority investments to map the supply chains of tomorrow.

Conceptual framework:
Operations management in an industry is a multidisciplinary function, encompassing in its fold basic strategic planning, material planning, manufacturing and production systems, cost control and industrial labour relations. One of the most significant parts of the operations is Material and Production Planning**,** which draws heavily from the

Supply Chain Management.
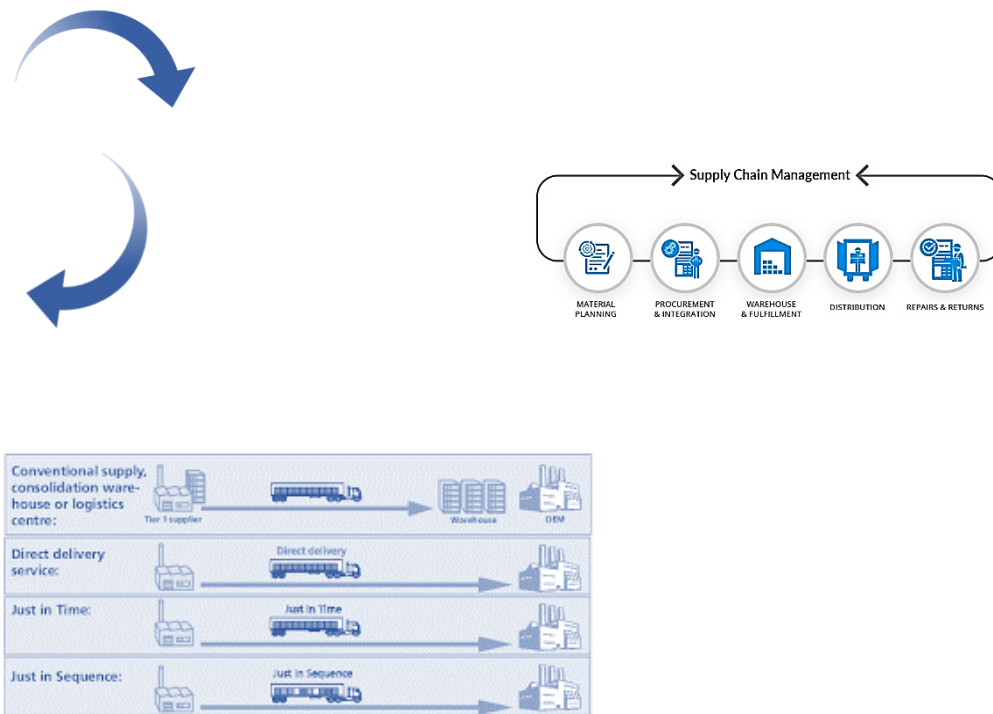
Figure 2: Correlation between Operations Management and Supply Chain Management

Supply Chain Management (SCM) is the management of the flow of goods and services and includes all processes that transform raw materials into final products. It involves the active streamlining of a business's supply-side activities to maximize customer value and gain a competitive advantage in the marketplace. SCM represents an effort by suppliers to develop and implement supply chains that are as efficient and economical as possible. Supply chains cover everything from production to product development to the information systems needed to direct these undertakings.

Typically, SCM attempts to centrally control or link the production, shipment, and distribution of a product. By managing the supply chain, companies can cut excess costs and deliver products to the consumer faster. This is done by keeping tighter control of internal inventories, internal production, distribution, sales, and the inventories of company vendors. SCM is based on the idea that nearly every product that comes to market results from the efforts of various organizations that make up a supply chain.

A **Supply Chain** is the connected network of individuals, organizations, resources, activities, and technologies involved in the manufacture and sale of a product or service. A supply chain starts with the delivery of raw materials from a supplier to a manufacturer and ends with the delivery of the finished product or service to the end consumer. Supply Chain is the complete end-to-end movement of the materials from source to the end-customer. It not only involves in-bound and out-bound logistics but also encompasses planning, scheduling, storage, supplier management, packaging, delivery, warehousing, and dealer management. Inventory is nothing, but the organization's money and resources locked into physical material, which is expected to generate the returns on investment. So, it is imperative for any organization to manage its supply chain and inventory very well, to lock in a minimum amount of money, without compromising on the operational efficiencies of the organization. As the Japanese guru and father of Toyota Production System, Taiichi Ohno said, the more inventory a company has, the less likely they will have what they need.

The level of flexibility that a company has directly reflects its ability to anticipate, adapt or react to changes in its environment of supply chain system. All supply chains in their endeavour to be lean and efficient, are designed on the basic assumption that globally there is a free-flow of materials and sourcing can be done from the lowest-cost locations around the world. This premise automatically builds in the elements of risks, vulnerabilities and resilience.

According to the International Organisation for Standardization (ISO), the risk would be defined as a "combination of the probability of an event and its consequences". **Risk** is thus the probability that an accidental phenomenon produces in a given point of the effects of a given potential gravity, during one given period. The International Federation of Red Cross and Red Crescent Societies states, **Vulnerability** in the context of a

disaster can be defined as the diminished capacity of an individual or group to anticipate, cope with, resist and recover from the impact of a natural or man-made hazard.[8] Psychology Today describes resilience as: "**Resilience** is that ineffable quality that allows some people to be knocked down by life and come back stronger than ever. Rather than letting failure overcome them and drain their resolve, they find a way to rise from the ashes." In a nutshell, resilience can be defined as the ability – and tendency – to "bounce back".

Aim and Objectives:

This paper aims to understand and surmise the influence and impact of the COVID19 pandemic on the Indian manufacturing industry. COVID19 is a Black Swan event which has traumatised the supply chains, this paper aims to provide some analysis of the extent of the influence it has had and answer the potential strategies which could evolve towards future shape of the supply chains. Additional aim of this study is to present an integrated document to provide a consolidated snapshot of vulnerability and resilience of supply chains.

The key objectives of this paper are:

1. To study the influence of COVID-19 on Supply Chains in the manufacturing Industry.

2. To identify the impact of COVID-19 on the Supply Chains in Indian Industry.

3. To summarise the potential strategies and guidelines for the future of supply chains to be resilient.

Research Design and Methodology:

To realise the aims and achieve the objectives of this study, a controlled research approach is proposed to explore the actual impact of COVID-19 on the industry in India. The existing literature, industry reports, consulting reports, articles and published papers serve as an additional guide to understand the influence of COVID-19.

A research questionnaire was administered to the controlled group of respondents, randomly drawn from industry and their response was sought on the impact and future course of their organization w.r.t Supply Chains. The responses were analysed and interpreted to drive towards logical conclusions.

Literature Review:

There are some research papers in the literature about the topic. Agrawal, Jamwal & Gupta (2020) have studied the effect of Covid-19 on the Indian economy and on supply chains in India. They have listed 18 critical barriers which affected the supply chains in India.

Ron & Wright (2008) state that "Supply Chains vary significantly in complexity and size but the fundamental principles apply to all the operations whether they be large or small, manufacturing or service, private or public sector. Supply Chain Management is not just for large big-name businesses such as Dell Computers, Wal-Mart, and Toyota Motors. It is for all businesses and for all operations."

Boyd, (March, 2020) in this survey it was found that 75 percent of companies are facing supply chain disruptions in some capacity due to the restrictions of transportation due to coronavirus and more than 80 percent of the respondents believe that their organization is going to experience some or other impact because of disruptions of COVID-19. Results also revealed that one in six (16%) companies report adjusting revenue targets downward an average of 5.6 percent because of coronavirus.

Elleuch, Dafaoui ,Elmhamedi & Chabchoub (2016) reviewed on vulnerability management and resilience in this context. Result shows that the optimization model and simultaneous methods could be used for dealing with recoverability of disrupted supply chains.

Kilpatrick & Barter (April 2020) studied that from long years emphasis on supply chain optimization was to reduce costs, inventories reduction moreover utilization of assets that has removed inventory buffers and also flexibility to absorb Supply chain disruptions and results reflected that COVID-19, companies are not fully aware of the vulnerability of their supply chain relationships to global shocks.

Michelman & Paul (2007) found that given the global nature of supply chains, their length, unpredictable business conditions, and shortened product cycles; they remain under threats due to natural disasters, accidents, terrorist acts, epidemics and intentional disruptions. Only those organizations which possess the critical trait of resilience, would be able to survive such situations. A resilient supply chain can be built with elements of redundancy, flexibility, and strong corporate culture.

Mukhtyar & Bhargava, (April 2020) found that the Chinese OEMs: The average resuming capacity utilization rate is around 70%, and it is estimated that production in China will resume from April. Findings show that OEMs in China remain very optimistic for the future and will maintain the planned schedule, going forward.

Rudzki, Douglas, Michael & Shelley (2006) say that Straight to the Bottom Line: An Executive's Roadmap to World Class Supply Management, suggest that "If you still think of your process as purchasing, you are living in the 1960s. Competition today is no longer company to company, but rather supply chain to supply chain…….The company that does the best job of integrating its supply network – in terms of objectives, strategies, processes and data linkages – creates optimal competitive advantage for entire supply chain and optimal value for its shareholders and customers."

Schwichtenberg & Achim (2020) say that Director of Operations Consulting at KPMG, Switzerland, in his report titled 4 Steps towards supply chain resilience in context of COVID-19 recommends that key factors are achieving full transparency across supply chain, assessing realistic customer demand, and taking longer term view of resilience.

Weigel (2010) says that Supply Chain Resilience Management: Is the Japanese Automotive Supply Chain resilient enough? which is a case study of Riken Corp. in Japan, highlights how even a small portion of the supply chain can be very critical. Riken Corp. was a supplier of small engine components viz. piston rings, etc. In 2007 when an earthquake decimated the plant of Riken Corp, it caused a chain reaction of plant closures of eight major Japanese car manufacturers and paralysed nearly 70% percent of the world's biggest production industry. Author argues that it is not only important to have an efficient and effective supply chain, but it also needs to have capability of event readiness, which is the active resilience preparation for a supply chain disruption.

Findings | Influence of COVID19 on Supply Chains:
The research was conducted with random respondents of a controlled group of people working in the industry. The respondents represented 8 different locations in India, with respondents being from the Manufacturing sector, automotive sector, Engineering sector and Services sector. Key results are reported here:

Sector	Percentage
Government Sector	0,00%
Services	13,04%
Process Industry	0,00%
Manufacturing	39,13%
FMCG	0,00%
Engineering	13,04%
Consumer Durables	0,00%
Automotive	34,78%
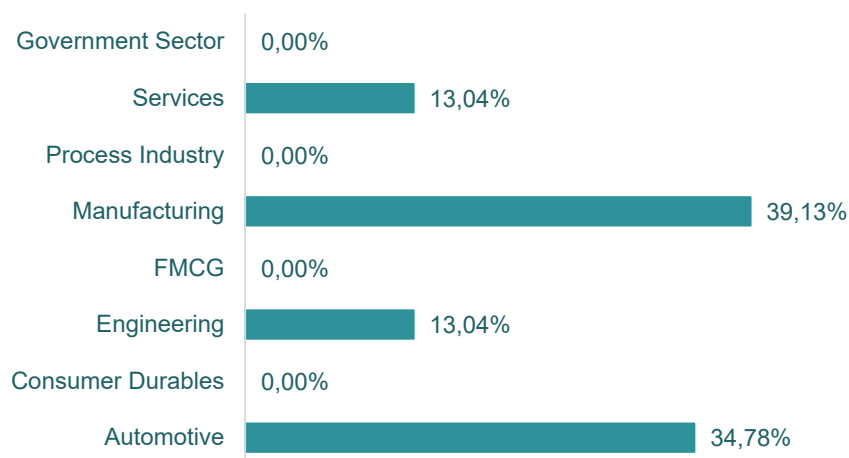
Graph 1: Frequency of respondents from various Industries

1.   The globalization of the supply chains is evident in the following response, which shows the direct or indirect dependence of companies on one or more of the supply regions.
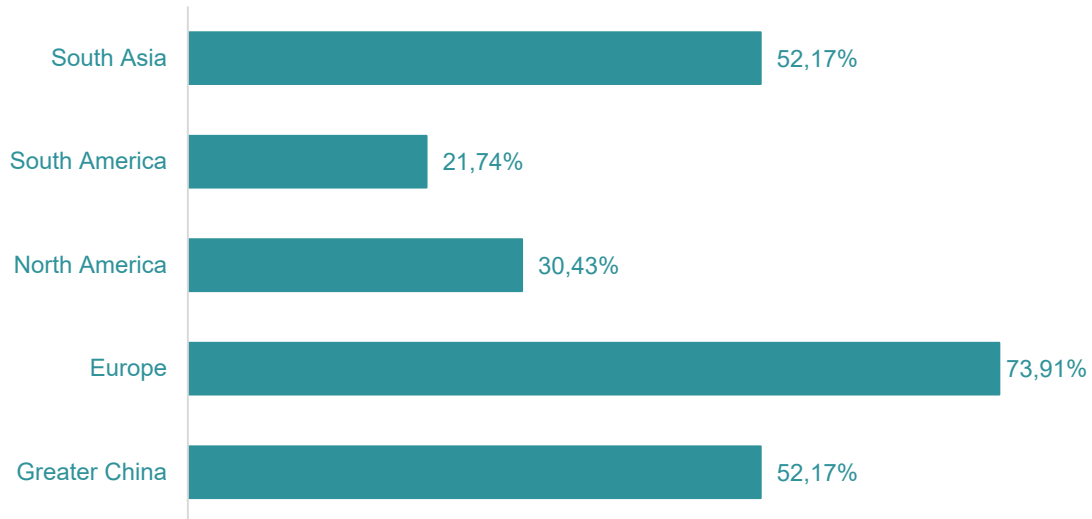
Graph 2: Frequency of respondents shows the direct or indirect dependence of companies

2. 100% respondents reported their supply chains being impacted by the COVID-19 pandemic.
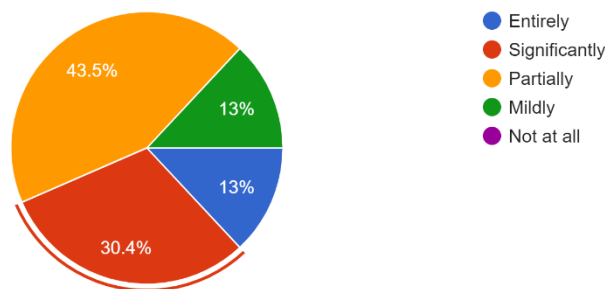
Graph 3: Frequency of respondents shows impacted by the COVID-19 pandemic.

3. All respondents reported their supply chains would normalise to its pre-COVID19 state within 9 months from restart.

Graph 4: Frequency of respondents impacted by the COVID-19 pandemic.
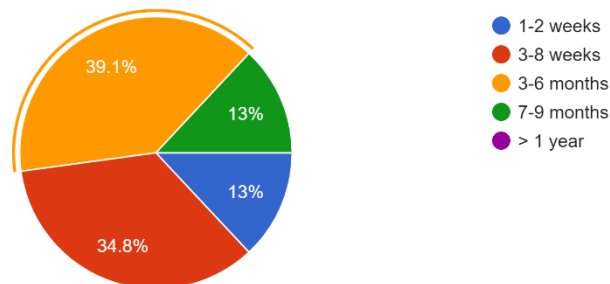
4. A significant 21.7% respondents reported that their organisations would not change its strategy w.r.t supply chains, despite COVID-19

Graph 5: Frequency of respondents would not change its strategy w.r.t supply chains

5. More than half (52.2%) respondents endorsed that their organisations' will opt for multiple supply chains instead of the current time-tested single chain, after COVID-19.
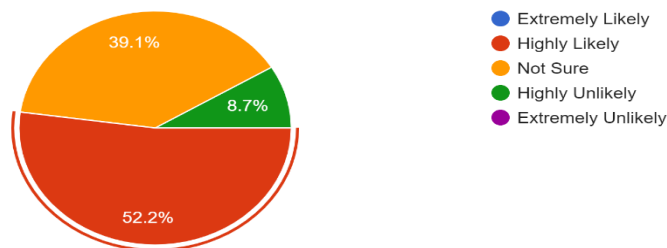
Graph 6: Frequency of respondents organisations' will opt for multiple supply chains instead of current time-tested single chain

6. The respondents were almost evenly split about the future strategies their organizations may opt for, to mitigate the risks of pandemics like COVID-19.

7. **Graph 7: Frequency of respondents' organisations to change future strategies**
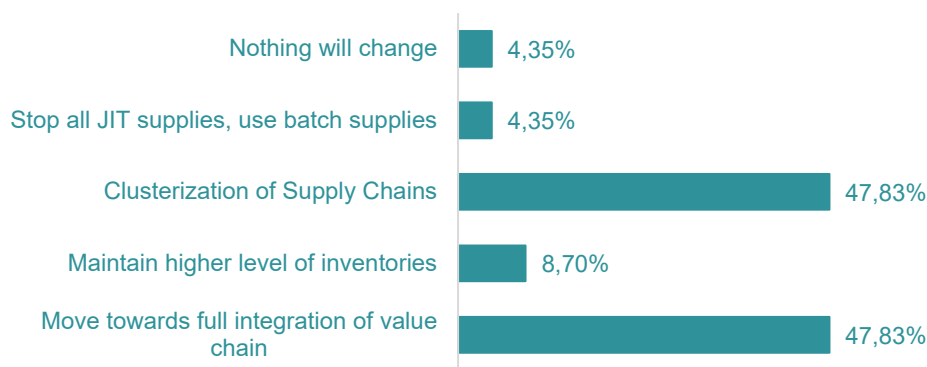
Graph 7: Frequency of respondents' organisations to change future strategies

Conclusion

In this paper, the researcher aimed to understand the impact and influence of COVID-19 on the supply chains of the Indian Industry. It was a clear conclusion that Indian industry has huge dependence on the inter-woven and globalised supply chains, with dependence on different regions of the globe. Moreover 100% of the organizations have seen their supply chains impacted by this pandemic. The industry is hopeful that as there has been a restart in May-2020, the situation would normalize to pre-COVID state by January 2021. It was surprising that 27% of the industry still feels that it would not change its futures strategies with respect to its present supply chains but majority of them (52%) foresee their organizations opting for multiple supply chain strategies in future, to mitigate the risks. The most preferred alternative strategies of the future show an equal leaning towards full integration of their value chain and cauterization of their supply chains, indicating a very conservative and defensive approach. The researcher is sure that these trends will provide a key insight in

understanding the influence COVID-19 has had on the supply chains of Indian industry and create a baseline for future comprehensive research in this direction.
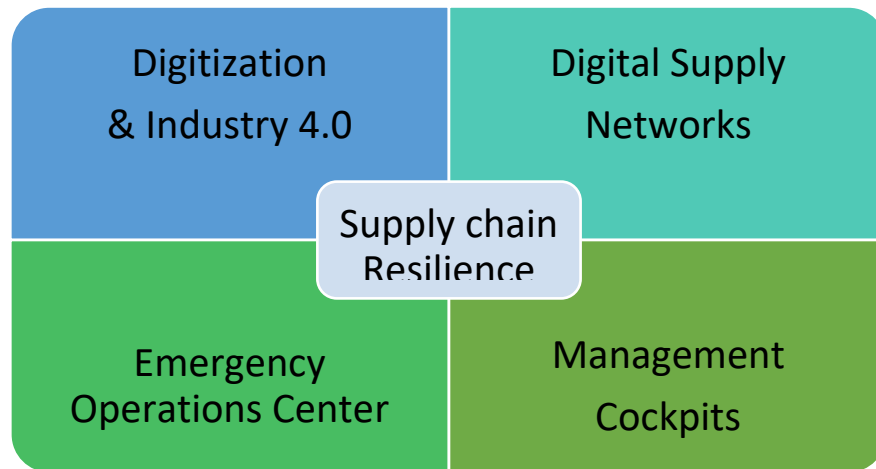
Figure 3: Suggested Model for Supply Chain Resilience

During the study the researcher also realised that there are several strategies required to adopt by future looking organizations, to avoid the influence of such pandemics in the future. One key theme that emerges is that digitization and adoption of industry 4.0 tools will be key to building resilient and flexible supply chains. The digital transformation needs to be accelerated to adopt intelligent procurement infrastructure, based on supply chain data management using intelligent automation and data analytics, which would enable simulation and modelling of newer supply chain strategies and maximize the insulation from supply chain disruptions. There would also be a need for accelerated migration towards cloud-based digital infrastructure, which will reinforce the future of working remotely from any part of the world, thus minimizing the impact of lockdowns. From the perspective of business strategy, the resilient supply chain models will call for integrating and aligning the digital supply networks with strategy and making flexibility, adaptability and risk management, an integral element of the supply chain design.

Organizations would need to look at establishing Emergency Operations Centre or Supply Chain Control Towers for controlling the communications and coordinating the action plans, including risk assessment and risk mitigation of their current supply chains. Management cockpits would need to be developed to provide a bird's eye-view of the end-to-end supply chain and a transparency approach will have to be fostered across the tiers, to build flexibility and resilience.

This paper is an attempt to present an integrated document on the consolidated snapshot of vulnerability and resilience of supply chains. This study cannot be a conclusion, but it can be a precursor to future research and studies on building resilient and digitized supply chains of the future.

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ANALYSIS OF TECHNOLOGIES USED IN ACADEMIC LIBRARIES OF MAHARASHTRA

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ABSTRACT
There has been a tremendous change in how people access information. In today's world there are many tools available to help individuals learn or research anything they want to know about. Libraries have adapted their services to meet this need by providing access to online databases and other digital resources for students at all levels. The paper gives an analysis of the technologies used in the academic libraries of Maharashtra. The study considers 200 users who use the various technologies offered through libraries. It studies the level of satisfaction of the users who use these services. The study finds that the users are averagely satisfied with the services of the libraries and their needs are substantially fulfilled. Overall, it was also found that the attitude of the users regarding the various services is positive.
Keywords: Library Technologies, Academic Libraries, Maharashtra, Satisfaction.

Introduction

Libraries are the places where people come to access knowledge. The libraries provide resources that can be used in research and learning. The libraries have systems to provide services ranging from online databases to computers. "The Information Revolution has been referred to as the 'Fourth Wave of the Industrial Revolution' (Osborne, 2004). This paper considers how educational institutions deal with this new paradigm, be it public or private in nature."

In today's information technology-oriented world, traditional libraries are struggling to keep up and compete with some other technology-based services operating at much lower prices. Libraries have adapted their services to help their users access various digital resources for learning or research. Libraries will have to be more than just a place to store books in the future. They need to provide services that answer their users' information needs as they exist in the 21st century. The services must include monitoring various technological tools such as automation platforms, wireless networks, and digital collaborative tools and applications, which can help them deliver better services to their users. Information is a vital resource in the modern world of today. Information can be defined as 'the acquisition of knowledge or skills by study, experience, or being taught'. The Information Age is defined by a shift from an industrial society, which was based on producing a physical product, to an economy where intangible products such as software programs are developed and sold.

Libraries are an integral part of the Information Age. They help people access the information they need and provide knowledge that people can use to better their lives. To be successful in this new Information Age, libraries will have to move beyond being repositories of books and other physical material to become more proactive information providers. Electronic databases and online services will play a large role in this transition.

The paper focuses on various technologies used in academic libraries in Maharashtra. The study also considers 200 users using these technologies through libraries. It studies the level of satisfaction of the users who use the services offered by libraries. Libraries are present in every part of our society all over the world; society needs to have a library so that people can access information and knowledge. A library is a collection of different types of books and other resources that are made available for the public to use from various locations, like schools, universities, or museums. These libraries are operated by various institutions such as Information Centers, Universities, or Societies. Libraries are places where people can get information and knowledge. Libraries also serve as information centers by providing different types of services related to the books they have. Different library facilities such as computers, photocopiers, scanners, internet, and Wi-Fi are provided by libraries. Various technology-oriented services are provided by libraries. Here is the list of various technologies that are being used by libraries:

Library Web Portals

The web portals of the libraries are the first place that users look when they need access to information. Library web portals can be accessed by all users. They have information such as a description of the library, its collection, card catalogs and online databases. The Internet provides people with access to information throughout the world, in many different languages and is available 24 hours a day. This has increased demand for libraries to provide more services through their web portals so that more people can use these services even during odd hours of the day.

Library Automation

Libraries can automate their services using various technologies like library automation systems like Koha. This allows them to provide users with more information and resources. For example, they can provide information on their collection, subjects, events and other such matters hosted on Web OPACs.

Institutional Repository

An institutional repository is a database that provides the institution with information on its digital resources, research and policies. It allows them to keep track of their collection and the activities of the library.

Digital Libraries

Digital libraries provide access to information through digital or online documents and online databases. They have an online catalog and links to search for documents. There are many Digital Libraries available on the web, such as National Digital Library of India (NDLI), which allows people to look for books, audio books, video lectures, and learning media etc.

Alert Services (Email / SMS)

Libraries send various information to their users by using alert services. This includes the new items available in their collection, new acquisitions and other library-related information.

Online Database Search Services

Various online databases are available in the libraries. Users can search for information using these databases. Librarians are helping their patrons to get the desired information.

Library Network of Public Access Computers

A network of public access computers in the library is provided to its users. The users must register before they can use these computers, which are connected to the Internet. They perform a wide range of searches using Internet search engines, visit web pages and so forth. These services can help them gain access to more information and resources.

Electronic Document Delivery

Libraries are offering documents to their users through email and other means. This helps them provide information more quickly than if they contacted libraries in person.

In-Room Computers

The library also provides computers in the rooms where its users live and study. These computers are a source of information that the users need for their studies and research. The computers help save time by allowing them to use Internet tools without leaving the library premises.

Collaborative Platforms (Video Conference, Webinar, Podcasts, Online Chat Service)

Libraries are using collaborative platforms where they can share information and resources with other users. This helps them interact with library users as well as other people around the globe.

Learning Management System (LMS)

The Learning Management System (LMS) is a technology that may be used to convert traditional libraries into digital environments. A LMS may be extremely beneficial to both the library department and the institution as a whole. Libraries can provide their users with LMS that are used for a variety of purposes—such as student lending, academic scholarship and other activities within the institution. This can help the library gather information about their users' needs and make them more effective learners.

Massive Open Online Course (MOOC)
Access to MOOC courses can also be offered through the library portals. These courses are online, which means that they can be accessed by anyone with a computer and Internet access. This can help the libraries to provide more knowledge to its students and research community.

Remote Access Services
Libraries can provide remote access services to their users and thereby allow them to access library resources from other locations.

Wi-Fi facility
Libraries can provide Wi-Fi facilities to their users so that they can access the Internet on the go. This saves them time as well as helping them save money by not having to pay high charges for accessing the Internet while traveling.

Mobile Apps
Libraries can provide various mobile apps to their users. These apps are available on various devices that allow users to gain access to library services as well as information.

QR Code
Libraries can provide their users with QR Codes. These codes can be scanned by a variety of devices, from computers to smartphones, which give access to the library's services and information.

Cloud storage and file sharing
Libraries can provide storage and file sharing services to their users. This allows them to access files without the need to buy a computer so that they can save money.

Networking and collaboration
Libraries can provide collaboration services, such as IRC, between their users. This helps them work together across the globe.

Open Educational Resources
Libraries can provide Open Educational Resources to their users. These resources can be accessed and used by students even if they do not have access to the Internet. They can use these resources even if they do not have their own computers.

RFID
Libraries can use RFID tags to books which can then be tracked. These tags help libraries keep track of their stock and record when books are returned.

Review Of Literature
Kulashekara (2018) studied the satisfaction of the people who visit libraries in Sri Lanka. In that study the researcher found that people are satisfied with library services in general but they have some suggestions to improve their services.

Mishra (2016) analyzed the effectiveness of public libraries in Uttar Pradesh, India by measuring user satisfaction and library performance indicators. In his study, the researcher found that users are not satisfied with the library services provided to them by public libraries. He also found out that there is a decline in many performance indicators in our libraries today and this decline is mainly because there is no proper management of our libraries.

Aman (2020) studied the role of modern technology in providing effective library services and information retrieval. The researcher studied the different ways in which the information that people need is obtained and analyzed them. He looked at the various aspects of the technology available today to provide services to those who use it and found that this technology can help people.

Lee (2019) studied how mobile phones have affected library usage by comparing student's use of library services with their use of mobile phones. The study found that library usage has increased with time as well as with the introduction of new technologies such as mobile phones, while there was a small decline in student behavior at the beginning, this decline was overcome by increasing phone usage and hence was not significant.

Sharma (2020) considered the 'Impact of Web 2.0 on Libraries, Librarians and Library Users'. They discussed the importance of libraries and how they can use web 2.0 technologies to improve their services for their users. The results of the study show that libraries should have improved their services through the use of web 2.0 technologies.

Dora (2008) analyzed the role of public libraries in rural China. In his study, the researcher showed how public libraries can play a vital role in people's lives. The study found that public libraries can provide services to many people in rural areas especially with the Internet, where there are limited resources.

Kumar. (2015) studied the effectiveness of public libraries as a tool for empowering mobile users in India. The study compared the behavioral patterns of people who have used libraries with people who have not. The study found that there was little difference between the groups and that although many people already use libraries, they cannot take full advantage of the services provided to them by their libraries.

Gopinath (2021) in his study, considered how libraries are using web 2.0 technologies; he conducted a survey among 69 libraries that participated in two events of the International Federation of Library Associations (IFLA). The study found that libraries are using a combination of these technologies, specifically blogs and wikis, but there are many more technologies that can be used to improve library services.

Wang (2019) analyzed the changing roles of public library services in rural China. The researcher explained how libraries are providing new services in the digital age and what they can provide to their users. The researcher also stated that public libraries need to make some considerable changes because they can't remain just as physical places where people come to get information or borrow books.

Rajan. (2018) considered the 'Impact of Web 2.0 on Libraries, Librarians and Library Users'. They discussed the importance of libraries and how they can use web 2.0 technologies to improve their services for their users.

Khopkar. (2015) studied the effectiveness of public libraries as a tool for empowering mobile users in India. The study compared the behavioral patterns of people who have used libraries with people who have not. The study found that there was little difference between the groups and that although many people already use libraries, they cannot take full advantage of the services provided to them by our libraries.

Desai (2016) considered the 'Impact of Web 2.0 on Libraries, Librarians and Library Users'. They discussed the importance of libraries and how they can use web 2.0 technologies to improve their services for their users. The users are in favor of using web 2.0 technologies in libraries because they can gain information easily without having to spend too much time there or wait for a long time, which is something that many people do not want to waste their time doing.

Shah. (2016) studied the effectiveness of public libraries as a tool for empowering mobile users in India. The study compared the behavioral patterns of people who have used libraries with people who have not. The study found that there was little difference between the groups and that although many people already use libraries, they cannot take full advantage of the services provided to them by our libraries. Moreover, the researcher found that users did not spend any time at all using these technologies in their mobile phones and they found this technology to be less effective when compared to other technologies available today. He stated that Web 2.0 technologies are good but they may not be useful in our public libraries because our public library users do not use them effectively.

Objectives Of The Study
1. To evaluate the attitude of the library users with regards to the use of technologies in academic libraries
2. To study the satisfaction level of users towards technologies.

Hypotheses Of The Study
H1: The attitude of the library users with regards to the use of technologies in academic libraries is positive.
H2: Users are satisfied with all the services provided by the academic library.

Methodology Of The Study
The research methodology adopted for this study is descriptive and quantitative which is used to gain basic understanding of the phenomenon under study. The study conducts a cross-sectional survey of the library users. To conduct this study, first an extensive questionnaire was designed. Then it was distributed among the respondents after making sure that they satisfied all the eligibility criteria. Purposive sampling has been used as

a sampling method to collect data from 200 respondents. These respondents were chosen from 10 leading academic libraries in Maharashtra. Descriptive statistics were calculated using SPSS and the hypotheses were also tested using T test in SPSS.

Data Analysis

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	18-30 years	78	39.0	39.0	39.0
	31-40 years	89	44.5	44.5	83.5
	41-50 years	24	12.0	12.0	95.5
	51-60 years	9	4.5	4.5	100.0
	Total	200	100.0	100.0	

Table 1. Age of Respondents.

The above table shows that 44.5% of the respondents were from the age group of 31-40 years. 39% of the respondents were from 18-30 years and 12% of the respondents were from 41-50 years. Only 4.5% of the respondents who took part in this survey were above 50 years old.

The results suggest that most of the respondents are relatively young, with a majority being in the age group of 31-40 years. However, the survey also included people from a variety of age groups, thus providing a more accurate representation of the population.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	106	53.0	53.0	53.0
	Female	94	47.0	47.0	100.0
	Total	200	100.0	100.0	

Table 2. Gender of respondents.

The above table indicates that 53% of the respondents were male and 47% were female. The results demonstrate a close distribution between genders, with a slight majority being male. This data reflects how gender equality has become increasingly important in society, as more and more people are recognizing the importance of both genders being seen and treated as equal. This is reflected in the data, as the responding population was almost evenly split between the two genders. Overall, these findings suggest that gender equality is steadily improving and will continue to do so in the future.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Business	20	10.0	10.0	10.0
	Salaried Employee	27	13.5	13.5	23.5
	Homemaker	9	4.5	4.5	28.0
	Student	59	29.5	29.5	57.5
	Research Scholar	85	42.5	42.5	100.0
	Total	200	100.0	100.0	

Table 3. Occupations of respondents.

Technologies used in libraries	Not Installed		Highly dissatisfied		Dissatisfied		Neutral		Satisfied		Highly Satisfied	
	Count	Row N %	Count	Row N %	Count	Row N %	Count	Row N %	Count	Row N %	Count	Row N %

Library Web Portals	4	2.0%	8	4.0%	24	12.0%	67	33.5%	37	18.5%	60	30.0%
Library Automation Web OPAC	51	25.5%	6	3.0%	26	13.0%	40	20.0%	35	17.5%	42	21.0%
Institutional Repository	6	3.0%	12	6.0%	30	15.0%	71	35.5%	39	19.5%	42	21.0%
Digital Libraries	88	44.0%	6	3.0%	22	11.0%	32	16.0%	30	15.0%	22	11.0%
Alert Services (Email / SMS)	46	23.0%	6	3.0%	30	15.0%	45	22.5%	39	19.5%	34	17.0%
Online Database Search Services	17	8.5%	10	5.0%	24	12.0%	65	32.5%	46	23.0%	38	19.0%
Electronic Document Delivery	26	13.0%	8	4.0%	22	11.0%	55	27.5%	39	19.5%	50	25.0%
Collaborative Platforms (Video Conference, Webinar, Podcasts, Online Chat Service)	34	17.0%	11	5.5%	28	14.0%	49	24.5%	35	17.5%	43	21.5%
Collaborative Social Networking Sites	27	13.5%	10	5.0%	22	11.0%	50	25.0%	38	19.0%	53	26.5%
Learning Management System (LMS)	19	9.5%	9	4.5%	33	16.5%	75	37.5%	45	22.5%	19	9.5%
Massive Open Online Course (MOOC)	18	9.0%	7	3.5%	34	17.0%	71	35.5%	46	23.0%	24	12.0%
Remote Access	24	12.0%	7	3.5%	30	15.0%	70	35.0%	44	22.0%	25	12.5%
Wi-Fi facility	0	0.0%	7	3.5%	30	15.0%	81	40.5%	57	28.5%	25	12.5%
Mobile Apps	6	3.0%	12	6.0%	25	12.5%	81	40.5%	57	28.5%	19	9.5%
QR Code	16	8.0%	8	4.0%	27	13.5%	77	38.5%	52	26.0%	20	10.0%
Cloud storage and file sharing	6	3.0%	12	6.0%	25	12.5%	86	43.0%	52	26.0%	19	9.5%
Networking and collaboration	4	2.0%	8	4.0%	30	15.0%	80	40.0%	57	28.5%	21	10.5%
Open Educational Resources	7	3.5%	13	6.5%	28	14.0%	86	43.0%	47	23.5%	19	9.5%
RFID	9	4.5%	15	7.5%	27	13.5%	80	40.0%	47	23.5%	22	11.0%

Table no 4. Satisfaction of the users of libraries under the study

The table above shows that the most common occupation among respondents was Research Scholar, at 42.5%. The second-most represented occupation was Students, with 29.5%, and Salaried Employee made up 13.5% of the responses. Business and Homemaker were both represented by 10% and 4.5% of the respondents. These findings suggest that the surveyed population was largely students and research scholars. This could be indicative of a higher level of education in the community, as well as a preference for academic pursuits. Overall, this data provides some insight into the typical occupation and educational attainment of the respondents, as well as their relative focus on academic or professional pursuits.

2% of the respondents stated that web portals were not installed. 4% expressed a high degree of dissatisfaction with the library web portals, while 12% were dissatisfied. 33.5% said they felt neutral about the web portals and 18.5% reported being satisfied. 30% stated that they were highly satisfied with the library web portals.

The results show that 25.5% of respondents stated that Library Automation Web OPAC was not installed. 3% expressed a high degree of dissatisfaction with the library automation web OPAC, while 13% were dissatisfied. 20% felt neutral about it and 17.5% reported being satisfied with the service. 21% stated that they were highly satisfied with the Library Automation Web OPAC.

This suggests that many people find the Library Automation Web OPAC to be a useful and convenient service. It could also indicate a positive attitude towards libraries in general, as they are increasingly utilizing digital platforms for better services and resources.

The results show that 3% of respondents stated that the Institutional Repository was not installed. 6% expressed a high degree of dissatisfaction with the service, while 15% were dissatisfied. 35.5% felt neutral about it and 19.5% reported being satisfied with the service. 21% stated that they were highly satisfied with the Institutional Repository.

These findings suggest that most people find the Institutional Repository to be useful and convenient, indicating a positive attitude towards libraries in general as they implement digital platforms for better services and resources. Additionally, these results could suggest an increase in educational opportunities for those who use this particular resource.

Overall, these results demonstrate that the Institutional Repository is generally well-received by respondents and has had a positive impact on their use of library services.

The results show that 44% of respondents stated that Digital Libraries was not installed. 3% expressed a high degree of dissatisfaction with the service, while 11% were dissatisfied. 16% felt neutral about it and 15% reported being satisfied with the service. 11% stated that they were highly satisfied with the Digital Libraries.

The results show that 44% of respondents stated that Digital Libraries was not installed. 3% expressed a high degree of dissatisfaction with the service, while 11% were dissatisfied. 16% felt neutral about it and 15% reported being satisfied with the service. 11% stated that they were highly satisfied with the Digital Libraries.

The results show that 23% of respondents stated that Alert Services (Email/SMS) was not installed. 3% expressed a high degree of dissatisfaction with the service, while 15% were dissatisfied. 22.5% felt neutral about it and 19.5% reported being satisfied with the service. 17% stated that they were highly satisfied with Alert Services (Email/SMS).

These findings suggest that most people find these services to be useful and convenient, indicating a positive attitude towards libraries in general as they continue to utilize digital platforms for better services and resources. It could also indicate an increase in convenience when accessing library information through mobile devices or through email notifications.

The results show that 8.5% of respondents stated that Online Database Search Services was not installed. 5% expressed a high degree of dissatisfaction with the service, while 12% were dissatisfied. 32.5% felt neutral about it and 23% reported being satisfied with the service. 19% stated that they were highly satisfied with Online Database Search Services.

The results show that 13% of respondents stated that Electronic Document Delivery was not installed. 4% expressed a high degree of dissatisfaction with the service, while 11% were dissatisfied. 27.5% felt neutral about it and 19.5% reported being satisfied with the service. 25% stated that they were highly satisfied with Electronic Document Delivery.

These findings suggest that electronic document delivery is generally well-received by respondents, indicating a positive attitude towards libraries in general as they continue to utilize digital platforms for better services and resources. This could also indicate an increased emphasis on academic pursuits among library users, giving libraries valuable insight into how best to serve their communities in terms of providing access to educational resources such as ebooks, online databases, and other digital materials.

The results show that 17% of respondents stated that Collaborative Platforms (Video Conference, Webinar, Podcasts, Online Chat Service) was not installed. 5.5% expressed a high degree of dissatisfaction with the service, while 14% were dissatisfied. 24.5% felt neutral about it and 17.5% reported being satisfied with the

service. 21.5% stated that they were highly satisfied with Collaborative Platforms (Video Conference, Webinar, Podcasts, Online Chat Service).

The results show that 13.5% of respondents stated that Collaborative Social Networking Sites was not installed. 5% expressed a high degree of dissatisfaction with the service, while 11% were dissatisfied. 25% felt neutral about it and 19% reported being satisfied with the service. 26.5% stated that they were highly satisfied with Collaborative Social Networking Sites.

The results show that 9.5% of respondents stated that Learning Management System (LMS) was not installed. 4.5% expressed a high degree of dissatisfaction with the service, while 16.5 % were dissatisfied. 37.5% felt neutral about it and 22.5% reported being satisfied with the service. 9.5% stated that they were highly satisfied with Learning Management System (LMS).

The results show that 9% of respondents stated that Massive Open Online Course (MOOC) was not installed. 3.5% expressed a high degree of dissatisfaction with the service, while 17% were dissatisfied. 35.5 % felt neutral about it and 23% reported being satisfied with the service. 12% stated that they were highly satisfied with Massive Open Online Course (MOOC).

The survey results also show that 12% of respondents stated that Remote Access was not installed. 3.5% expressed a high degree of dissatisfaction with the service, while 15% were dissatisfied. 35% felt neutral about it and 22 % reported being satisfied with the service. 12.5% stated that they were highly satisfied with Remote Access.

These findings point to an overall positive attitude towards libraries in general as they continue to develop more efficient delivery methods for better access to educational resources such as ebooks, journals, textbooks, and other digital materials across digital platforms. It is possible that library users find these services useful and convenient which could indicate an increased emphasis on academic pursuits among library users in terms of better access to quality educational resources. This could be vital in terms of allowing libraries to tailor their offerings to best meet the needs of their communities and inform larger discussions around libraries' roles in society moving forward.

The survey results also show that 3.5% of respondents expressed a high degree of dissatisfaction with Wi-Fi facilities, while 15 % were dissatisfied. 40.5% felt neutral about it and 28.5 % reported being satisfied with the service. 12.5% of the respondents stated that they were highly satisfied with the Wi-Fi facility.

The survey results also show that 3.0% of respondents stated that Mobile Apps were not installed. 6.0 % expressed a high degree of dissatisfaction with the service, while 12.5% were dissatisfied. 40.5% felt neutral about it and 28.5 % reported being satisfied with the service. 9.5% stated that they were highly satisfied with Mobile Apps.

The survey results also show that 8.0% of respondents stated that QR Code was not installed. 4.0 % expressed a high degree of dissatisfaction with the service, while 13.5% were dissatisfied. 38.5% felt neutral about it and 26.0 % reported being satisfied with the service. 10.0% stated that they were highly satisfied with QR Code.

The survey results also show that 3.0% of respondents stated that Cloud storage and file sharing was not installed. 6.0 % expressed a high degree of dissatisfaction with the service, while 12.5% were dissatisfied. 43.0% felt neutral about it and 26.0 % reported being satisfied with the service. 9.5% stated that they were highly satisfied with Cloud storage and file sharing.

These findings suggest that users are beginning to recognize the value of cloud-based services in accessing library resources. As more educational institutions move towards a digital platform, it is likely that cloud storage and file sharing will become an integral part of library users' experience. This data can be used to inform larger discussions around how libraries should continue to leverage cloud-based services in order to better serve their communities and improve access to quality educational resources.

The survey results also show that 2.0% of respondents stated that Networking and collaboration was not installed. 4.0 % expressed a high degree of dissatisfaction with the service, while 15.0% were dissatisfied. 40.0% felt neutral about it and 28.5 % reported being satisfied with the service. 10.5% stated that they were highly satisfied with Networking and collaboration.

These findings suggest that users are starting to appreciate the value of networking and collaboration in accessing library resources. As more libraries embrace technology, it is likely that these services will continue to become an important part of library users' experience. This data can be used to inform larger discussions around how libraries should continue to leverage networking and collaboration tools in order to better serve their communities and improve access to quality educational resources.

Overall, this survey data indicates that library users are starting to recognize the value of technology-based services for accessing library resources. These findings can provide insight into how libraries should continue to leverage technology to better serve their communities and improve access to quality educational resources.

The survey results also show that 3.5% of respondents stated that Open Educational Resources were not installed. 6.5 % expressed a high degree of dissatisfaction with the service, while 14.0% were dissatisfied. 43.0% felt neutral about it and 23.5 % reported being satisfied with the service. 9.5% stated that they were highly satisfied with Open Educational Resources.

The survey results also show that 4.5% of respondents stated that RFID technology was not installed. 7.5 % expressed a high degree of dissatisfaction with the service, while 13.5% were dissatisfied. 40.0% felt neutral about it and 23.5 % reported being satisfied with the service. 11.0% stated that they were highly satisfied with RFID technology.

Mean Values for satisfaction towards different services	N	Mean	Std. Deviation
Library Web Portals	200	4.5250	1.25589
Library Automation Web OPAC	200	3.6400	1.85678
Institutional Repository	200	4.2550	1.27991
Digital Libraries	200	2.8800	1.88237
Alert Services (Email / SMS)	200	3.6350	1.75990
Online Database Search Services	200	4.1350	1.43774
Electronic Document Delivery	200	4.1150	1.62325
Collaborative Platforms (Video Conference, Webinar, Podcasts, Online Chat Service)	200	3.8450	1.70750
Collaborative Social Networking Sites	200	4.1050	1.66669
Learning Management System (LMS)	200	3.8750	1.34103
Massive Open Online Course (MOOC)	200	3.9600	1.35558
Remote Access	200	3.8900	1.44511
Wi-Fi facility	200	4.3150	.99029
Mobile Apps	200	4.1400	1.13439
QR Code	200	4.0050	1.29746
Cloud storage and file sharing	200	4.1150	1.12611
Networking and collaboration	200	4.2050	1.07646
Open Educational Resources	200	4.0500	1.15506
RFID	200	4.0350	1.23344
Valid N (listwise)	200		

Table no 6. Mean Values for satisfaction towards different services.

The above table shows that most of the mean values are hovering around 4. All the mean values except a few are above 4. Thus, we can conclude that in most of the cases, the satisfaction is above average. **This also shows that the users have a positive attitude as far as services provided by libraries are concerned.** To check if the results were statistically significant, a one sample T test was used to find out whether the grand average satisfaction scores were above average.

	N	Mean	Std. Deviation	Std. Error Mean
Average Satisfaction Scores	200	3.9855	.38438	.02718

Table no 7. One Sample Statistics

	Test Value = 4					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Average Satisfaction Scores	-.533	199	.595	-.01447	-.0681	.0391

Table no 8. One Sample Test

The above table shows that the users have expressed average levels of satisfaction regarding the usage of tech services which are provided by the academic libraries. A sig value of greater than zero helps us to accept the null hypothesis that the assumed mean and actual mean are equal. Thus, we can reject the hypothesis that the users are highly satisfied as the level of satisfaction show average levels and not high levels of satisfaction.

Conclusion

Overall, this survey data offers insight into library users' attitudes toward different technologies and digital services offered by their respective libraries. It appears that they are primarily satisfied with most of these services, but there is still room for improvement in terms of making them more user-friendly, accessible, and collaborative in nature. In addition, it also indicates an increasing trend toward academics among library users which could lead to improved access to quality educational resources in the future. Ultimately, this survey data can be used as a basis for further research on how libraries can better serve their communities in the digital age. The data suggest that library users find the services offered by their libraries highly useful and convenient across digital platforms, indicating a positive attitude towards libraries in general as they continue to develop more efficient delivery methods for better access to educational resources such as ebooks, journals, textbooks, and other digital materials. These results can help inform library programming decisions going forward, allowing them to tailor their offerings to best meet the needs of their communities. Furthermore, this could point to an increased emphasis on academic pursuits among library users, which could have important implications in terms of providing access to quality educational resources. Ultimately, this data can be used to inform larger discussions about libraries' roles in society moving forward.

Further research is necessary in order to gain a better understanding of how technologies are being used by library users and how they can be improved going forward. Additionally, it would also be beneficial for future surveys to focus more on specific user experiences with individual services, as well as how satisfied they are with each one. Such studies will provide valuable insight into what types of technologies and services work best for different types of library users. With this information, libraries can continue to develop digital learning environments, services, and support that offer the highest value for their learners and target audiences, as well as remain an important resource in the digital age.

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ANALYTICAL STUDY ON DETERMINANTS OF DIVIDEND POLICY FOR STAKEHOLDERS PERSPECTIVE IN INDIA

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ABSTRACT
Dividends are very important to management, stakeholders, and future investors. In this context, the current study aims to explain different financial aspects influencing Indian firms' dividend choices and give critical consequences. The OLS panel regression approach with two approaches was used. In this research, we looked at the top 20 firms in terms of market value. The article provided facts regarding the three most important financial factors that have a favourable and substantial impact on Indian corporations' dividend policies. Dividend history, present profitability, and investment prospects are all important factors in determining a company's dividend policy. Dividend considerations are one of the most important financial managerial decisions, with major consequences for managers, shareholders, as well as academics. Boss has to calibrate their scheme for pay-out depending on previous distribution patterns and assure dividend payment reliability to retain credibility in the capital market. Investors seeking a high dividend yield should consider investing in firms with stronger profitability, a track record of prior dividend payments, and investment prospects. These findings are valuable in forecasting corporate practices during the COVID-19 economic meltdown.
Keywords: Dividend, Stakeholders, OLS Panel Regression, Financial Factors, Profitability, Investment Prospects & Reliability

Introduction
Dividends are one of the most important elements of finance, affecting a wide range of stakeholders such as executives, investors, regulators, and academics. Shareholders provide money to a corporation, and dividends are one of the primary tools for returning that investment. As a result, management must make comprehensive judgments on the number, timing, and type of shareholder rewards. It may take the form of a cash dividend, a bonus issue, stock buybacks, or DRIPs. However, it is not as straightforward as it seems. There are several elements that influence the firm's dividend policy, and previous research has shown no agreement. Dividends, according to [1] are a riddle that has been unanswered for more than four decades. The majority of dividend analyses are from sophisticated nations such as the United States, Tokyo, Seoul, and London. In the sphere of dividends, however, developing nations such as India have been overlooked. The current research attempts to address this hole by giving actual data from India's standpoint. Furthermore, recent adjustments in special dividends made by firms in light of the economic meltdown may be addressed using circumstances influencing a firm's dividend choice.

The article is presented in a methodical way. First, we discussed the importance and purpose of our research, followed by a review of known literature on variables influencing dividend practise throughout the globe. As a result, we may infer numerous major aspects influencing dividend distributions and construct our hypothesis in accordance with our aims. Following that, we reported on the approach we used to evaluate this theory. Finally, the findings of the exploratory study, as well as their reliability, have been addressed, and closing observations and consequences have been provided.

Significance Of The Study
The significance of dividend payments may be deduced from the concept that they influence the profitability of the company under unsatisfactory circumstances (Modigliani and Miller). Furthermore, it has an impact on the company's financial statements since cash dividends reduce the amount of money accessible to the organisation. There are several elements that influence Indian corporations' dividend and pay-out policies. However, it is critical to determine which criteria are substantially essential in dividend policy. Understanding the elements that affect pay-out, either adversely or favourably, would benefit investors wishing to invest in Indian firms. Furthermore, a company's executives must consider the factors that influence pay-out procedures. These studies would provide critical information and valuable perceptions for shareholders to consider when making decisions during a pandemic crisis. It will be of great interest to politicians, academics, business executives, and a variety of other parties.

Literature Review

This section of the literature review presents the arguments put forth by various researchers looking at the significance and existence of dividend payments across businesses. Furthermore, we will identify significant dividend policy determinants that will aid us in developing our article's hypotheses. Baker (1985) discovered two of the most critical variables: the expected amount of future company revenues as well as a guide to historical rewards, which is congruent with the Lintner framework. According to Nur and Karnen (2011), organisations that pay dividends are characterised by their size, big cash reserves, great efficiency, minimal debt, and rapid development. Lee (2001) and Ganguli (2014) discovered that dividend announcements influence enterprises. Brav (2005), discovered that dividend choices are still made cautiously. In an incomplete information context, Bhattacharya (1979), devised a framework in which dividend payments reflect projected cash flow. According to Jenson (1986), dividend payments to shareholders limit the funds under management's authority and require them to watch the capital market for new capital. It implies that dividends serve as a governance instrument. Moore and Braggion (2008), discovered significant support for the data asymmetries model of reward payment in the United Kingdom, as well as low sustain for the advertising copy. In publicly listed Indian banks, Bodla (2007), find support for the Lintner model. According to Dewenter and Warther (1998), Keiretsu firms are particularly supportive of the idea of reduced agency costs and data mismatch. Japanese businesses are open to modifying their dividend strategy. According to 2011 research by Wang, companies that paid dividends had higher earnings, property growth rates, and market-to-book ratios than those that didn't from 1992 to 2007. According to Jeong (2013), the major causes of dividends in South Korea are institutionalised financial sector characteristics such as bank rate level and tax rate. In their examination of dividend policy in six developed financial markets, including Canada, UK, France, Germany, US, and Japan, Denis and Osobov (2007) discovered a correlation between business size, profitability, and firm maturity in these six countries. According to DeAngelo and Skinner (2007), the largest and wealthiest American firms are primarily responsible for making cumulative payments.

Variables Influencing A Company's Dividend And Distribution Strategy

1. Income, in his famous research, According to Lintner (1956), a company's net earnings are the main factor influencing dividend variations. According to Reddy (2005) [11], businesses that pay dividends are more lucrative. As a result, present-year profits are a significant predictor of dividends. Present profits and dividend payments appear to have a favourable association.

2. Use leverage. Several studies have shown that economic powers (using a lot of credit) have a negative effect on dividend policy (Al-Malkawi, 2007), [12] since financial power raises financial responsibilities in addition to operating expenses, forcing businesses to pay a smaller amount of bonus. Arrears holders attempt to compel the corporation to pay a smaller bonus.

3. Liquidity is accessible. According to La Porta. (2000), business managers will invest in wasteful projects that have a negative net present value when free cash flow is abundant. It is therefore conceivable to claim that the agency cost of cash flow is substantial. Dividends may contribute to lowering the cash flow agency cost. It lessens management's ability to manage resources. We might expect a favourable correlation between cash flow and the dividend pay-out ratio based on current research.

4. Firm size is likely to have a positive link with dividend distribution. However, significant sales growth may require capital investment, lowering the payment. In the instance of rapid-growth corporations, according to La Porta. (2000), businesses with better legal protection should have lower dividend pay-outs. Large corporations, on average, pay more dividends than smaller companies since they are more mature in terms of growth.

5. Age because reputation grows with age, the link between age and reward is complicated. This, in turn, will help corporations reach out for financing more cheaply, allowing them to improve their payments. Firms with a greater age will attain maturity and pay out bigger dividends. As a result, we anticipate a positive association between age and dividend payments.

6. Investment Possibilities: In general, dividend distribution and investment opportunities are inversely connected. The rationale for such a link is self-evident, given that investment possibilities are funded by retained profits. The more the retained profits, the lesser the dividend distribution. However, the consistency, as well as the reputation for paying dividends, may make it unimportant.

7. History of dividend payments in accordance with a number of empirical research, management considers dividend payments while establishing the current-year pay-out. The current-year pay-out is expected to have a favourable correlation with dividend history. In other words, dividend payments benefit from a delayed pay-out.

Objectives Of The Study
The following are the aims of the study:

1. To comprehend the key elements influencing a company's payment practices, as evidenced by prior examination and research.

2. To clarify essential macroeconomic determinants influencing a firm's dividend choice in India and present statistical findings in favour of it.

3. Using two concepts, assure coherence and durability of the results.

4. Explicitly consider and provide for executives, investors, and scholars.

Hypothesis Development
Taking into account the article's aims and drawing on existing research in the dividend sector, the study attempts to investigate the theoretical model appended below:-
H01: Earnings and profitability have no bearing on the dividend policy.
H02: The dividend payment is unaffected by the preceding year's pay out.
H03: Leverage has no influence on the firm's dividend policy.
H04: Equity funds have no bearing on the dividend policy.
H04: Size does not matter in dividend policy.

Data Analysis
The research attempts to determine if payment is influenced by profits, dividend distribution, debt, investing possibilities, and scale. Dividend served as a predictor factor in our research, whereas profitability, payment history, impact, savings potential, moreover size served as irrelevant variables. The variable has been chosen for the BSE 100 companies from 2008 to 2018. Table 1 in the appendices contains sector-specific information on the chosen firms. The subsequent prototype was created to test a few of the aspects that were previously mentioned: $DPSt = a + b1\ EPS + b2\ PDPS + b3\ DE + b4\ PB + b5\ SALES$.

Model1: Everywhere, DPS denotes pay-out each equity, EPS denotes earnings each equity, DE denotes debt equity ratio, and PDPS denotes past year pay-out, PB denotes price-book value ratio (signify savings potential), moreover the term SALES refers to the normal log of sales, DPSBt.

Model 2: Is defined as $a + b1\ EPSB + b2\ PDPSB + b3\ DE + b4\ PB + b5\ SALES$.

Using the second model to address the heteroscedasticity issue as well as lessen the impact of the BSE 100 companies' fluctuating manuscript values. The terms "EPSB" and "DPSB" stand for "per-share earnings downscaled by valuation" and "per-share dividend downscaled by valuation," respectively. The acronym DE stands for debt equity ratio and PDPSB is for the previous manuscript value-based annual dividend scale. SALES is for "natural log of sales," while PB refers to "price book value ratio" (which represents investment potential). (Size)

Region	Number of Companies
Services for Communication	2
Discretionary to the consumer	5
Consumer Products	2
Power	3
Health Care	1
Industrial	2
IT	2
Materials	3

Table 1. Division-Specific Directory Of Firms
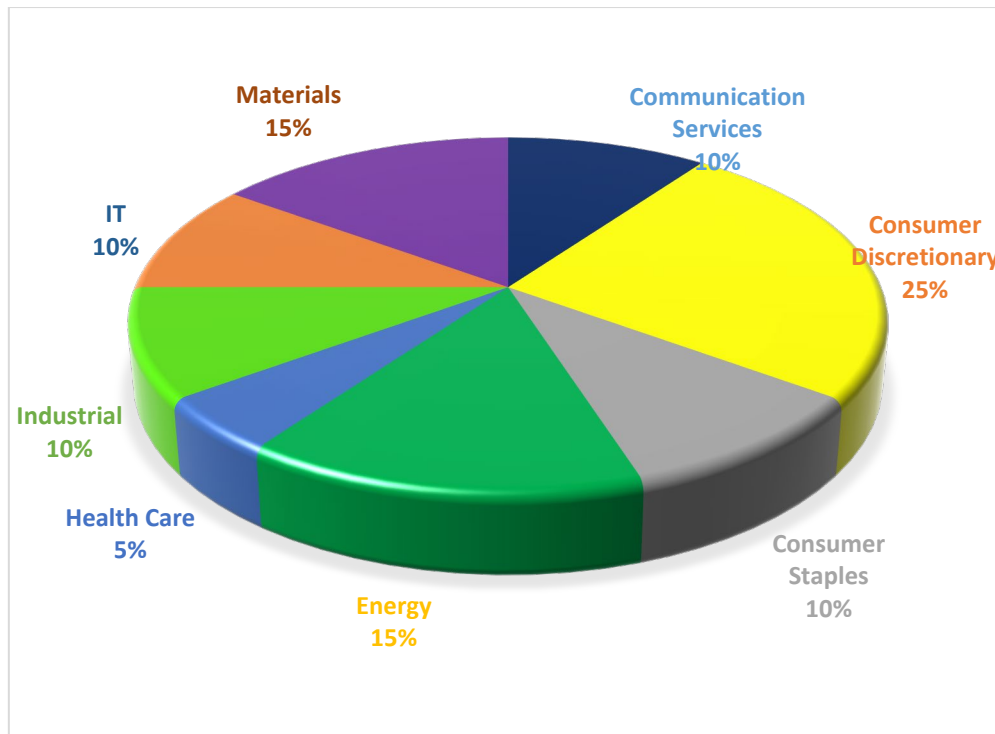
Fig. 1: List of Firms Division-Wise

Outcome Of Model 1

The adjusted R square in this analysis is quite excellent at 0.64, indicating that the predictor variables explain 64% of the variance in the dependent variable. Significant F = 0.0, indicating that all predictor parameters included in the analysis influence the pay-out each equity. Lagged DPS, leverage, and size all have an impact. As predicted, the delayed dividend is linked positively. Size and indebtedness are inversely associated with dividend pay-out, which is consistent with our prior forecast. As projected, the lag between dividends and earnings in the current year is favourable. Interestingly, the individual investor provided by the P/B ratio factor is favourably and strongly associated with dividend distribution. There is no synchronization, as shown by the Durbin-Watson score of 1.887. This implies the pay-out distribution is favourably connected to dividend history, revenue, and investment prospects.

Because LM statistics were negligible for Model 1, we pooled the data. The pooled data suggest that the EPS coefficient of 0.096 is also important at the 5% stage. Because dividends per share and profits per share are closely related, this means that if EPS increases with one unit, DPS increases about 00.094. At 0.64, the ratio of delayed payment for each equity is also significant. The loan equity coefficient and the log of sales are both negligible. The "P/B" coefficient was beneficial and significant, with a value of 0.33, showing an appreciative association between savings and chance, as well as dividend payments. This is not what we expected. This implies that, despite attractive investment alternatives, corporations carry on raising dividends. This might be because of the company's desire to maintain its image in the capital market in order to get financing for capital investments since dividends indicate the firm's future potential.

Outcome Of Model 2

Table 2 depicts the outcome of type 2 to provide a more reliable image. The corrected R square of 0.855 as well as the important f of 0.0 indicates that the concept is sound. Both EPS and lagging DPS for each manuscript worth have a positive and significant impact on present DPS for each manuscript worth. Even though it has a little effect on loan sales and debt equity, the P/B ratio has a positive and significant influence. The results closely match model 1. F has zero significance, indicating that not every standard is nothing. Current DPS per book value is significantly and favourably impacted by both lagged DPS per book value and EPS per book value. The P/B ratio has a favourable and considerable impact, whereas the results for loan sales and debt equity are small. When the findings of both models are combined, we can see that there are three explanatory factors that determine dividend pay-out: dividend past performance, current earnings per share (EPS), and investment options. Other variables, such as in-store sales and the debt-to-equity ratio, contain a shaky and irrelevant association through the present dividend each distributes. Although the effects are minimal, there is occasionally an inverse relationship between leverage and dividend distribution.

Parameters	Type 1		Type 2	
	Coefficients	Total Value	Coefficients	Total Value
consistent	0.42	-	4.73	-
Incomes	0.096	6.32	0.135	3.84
Dividend history	0.64	15.54	0.611	8.02
Leverage	-0.006	-0.87	-0.0065	0.72
Saving prospects	0.33	4.29	0.59	3.01
Scope	-0.09	-0.42	0.17	0.61
Typical Error	7.21	-	5.91	-
Impact F	0	-	0	-
Adjusted R^2	0.64	-	0.851	-
DW Indicators	1.85	-	1.84	-

TABLE 2: OBSERVED OUTCOMES OF TYPE 1 AND TYPE 2
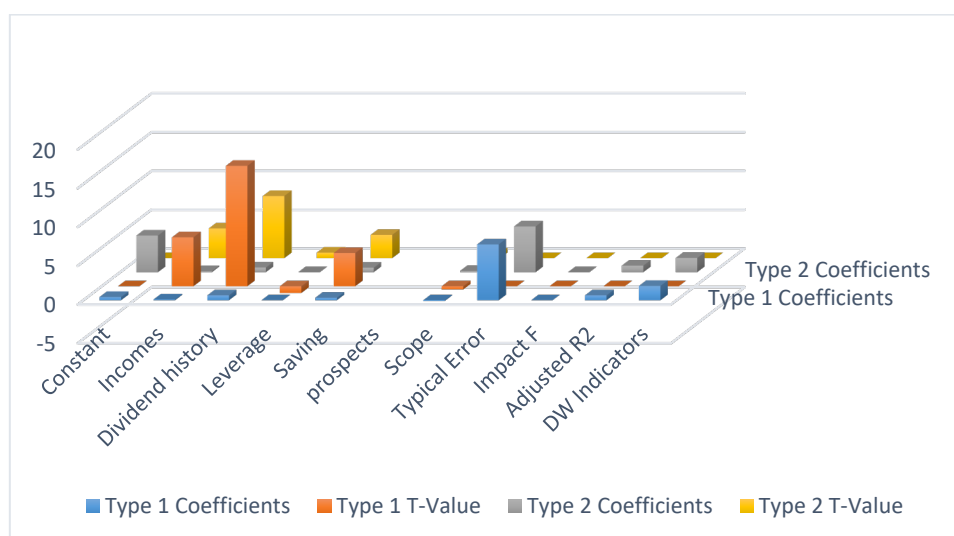
Fig. 2: Observed Outcomes of Type 1 and Type 2

Robustness Of Results
Because the LM parameters are negligible in both models, the OLSR regression model is chosen. In this work, we employed solid standard errors to get dependable and repeatable data devoid of homoscedasticity. According to Durbin Watson Statistics, the correlation coefficient is not a cause for concern. Combining big data with spanning the period methods reduces a variety of additional issues, such as unknown parameters and non-normality. It provides more flexibility and gives an indication of effectiveness. The employment of models and cross-checking the findings for consistency confirms the rigour and reliability of our outcomes.

Conclusion
Dividend history, present profitability, and investment prospects are the three primary aspects that substantially and positively influence Indian firms' dividend policies. Contrary to our expectations, the link connecting savings chance and dividend pay-out be favourable. Explanation for this link is that pay-outs are consistent. When there are investment prospects, corporations are engaged in delivering consistent dividends while paying smaller dividends to continue their image on the stock sector. In model 1, leverage is inversely associated with dividend payment for a few years only, which is generally inconsequential overall. The link between business structure and pay-out policies is negligible. Because our database primarily contains large corporations, company size may be an insignificant determinant of dividend policy. Size-related concerns, whether severe or trivial, must be considered in terms of size, for important conclusions to emerge. Ultimately, shareholders seeking dividend stocks in Indian firms should seek out companies with high EPS, a long dividend history, and a wide range of investment choices. It also implies that the indicating model is appropriate in the condition of our Nation corporations, where dividend adjustments are considered a signal of future company success.

Presumption
This article offers three insightful ideas on dividend policy. To begin, profitability has a positive and significant impact on a company's payment practices. This conclusion is widespread and is supported by the majority of

investigations. Second, dividend history has a favourable and considerable impact on pay-out strategy. This shows the management is cautious in adjusting their pay-out strategy in response to changes in profits. Third, investing potential is positively associated with pay-out strategy, which contradicts the MM assumption premises to say that if there are increased prospects, the firm will keep earnings and pay a lower dividend. However, in the situation of India, we have noticed that if investment prospects are greater, corporations continue to pay dividends rather than cutting them. It might be because corporations desire to maintain their credibility from the perspective of outside shareholders in an information asymmetries situation. The preponderance of family businesses in large Indian enterprises poses a dilemma of agency knowledge and asymmetrical knowledge among scattered shareholders and the governing authority of management. That is why dividends in India are tenacious in character. Shareholders of a company with a high pay-out ratio must look for firms with higher revenue, a history of dividend payments, and financial value. As the COVID-19 financial meltdown reduces corporate profits, most notable corporations will undoubtedly slash dividend pay-outs. It will cause greater volatility in payment actions in the future. Development chances on behalf of a firm lean toward shrinking, which opens Pandora's Box for depositors seeking high-dividend stocks. However, a firm that retains its dividend during the financial crisis is an excellent investment to purchase since dividend adjustments reflect future profit sustainability. When developing a dividend policy, Indian company executives should keep these key things in mind. Investors seeking high dividend yields might invest in firms that have a high concentration of these important elements. Academicians should strive to reach greater unanimity in dividend research. Furthermore, we may include share repurchases as a mitigating element in dividend choices.

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ASSESSMENT OF VANET SMART & INTELLIGENT COMPUTING SYSTEMS FOR TIME-CRITICAL ACTIVITY

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ABSTRACT
The capacity of a field computer to work in tandem with a smart transportation system means that it can instantly calculate, store, and transmit delay notifications to vehicles. Conventional vehicle networks have several difficulties with resource deployment and management since they are neither scalable, flexible, or connected. Recently, cloud computing has been employed to accomplish these goals. This research presents a framework for evaluating the efficacy of cloud and edge technologies based on a wide range of criteria, which may be used to determine the best practices for automotive networks. The latency and server usage time of EC are reduced by 64% compared to cloud computing. Simulations are performed using both Edge CloudSim and Cloud Sim technologies. This broadcast saves space and resources on servers and in vehicles by making information more widely available.
Keywords: CloudSim simulation, Blind De-Convolution, Edge Cloud Sim, Edge Computing(EC), Task-Driven Learning

Introduction

In 2001, the transportation sector adopted VANETs (Vehicular Ad-hoc Networks), a kind of wireless cellular networking with several hops. Once a vehicle enters a certain range, it will connect to the mobile network automatically (etaI., 2015). Vehicles that are linked to the internet may share data about where they are and how fast they're going with one another. The two main categories of VANET communication protocols are V2V & V2I. These transmission and reception methods also allow for mobility.

There are compute, communication, scalability, adaptability, and intelligence issues with the current VANET architecture (Gupta & Chaba, 2014). VCC was created so that VANETs may get computing resources from the Cloud while also benefiting from Cloud Computing's advantages (Azees, Vijayakumar, & LJ, 2016). Improved processing performance and resource usage in-vehicle are achieved (Hassan, Hossain, & Atiquzzaman, 2016). The traditional methods are too much for RSUs to handle, hence there are long delays, therefore. This research led to the development of the Edge- Computer (EC) idea, which aims to address the problems of low processing efficiency, slow response times, and high resource consumption. Edge computing (EC) is distinguished by several features, including low latencies, geo-distribution, diversity, portability, location-awareness, and actual real-time based interaction (Jain & Jeyakumar, 2016). This study advocated for edge-based distribution as a method to improve the efficiency and scalability of VANETs. Most importantly, the research highlights the security problems and vulnerabilities associated with edge computing (EC).

We begin by looking at what has already been written on MEC integration in automobile networks. The proposed system includes two crucial VANET-based applications, such as travel comfort and traffic safety, to address scalability and efficiency.

In addition, we will go through the system based on the simulation method we used to assess the performance of our system during the application phase.

The remaining details are presented in the following sections. In Section 2, we'll talk about some related research on edge computing (EC) and the cloud; in Section 3, we'll outline and expand on some potential solutions. In the last section, we evaluate and discuss the experimental findings. The last section addresses implications for the future. The list of sources is included at the end of the article.

Literature
The state of the art in studies examining the integration of MEC in vehicular communications, as well as their potential applications and challenges. All the necessary concepts, applications, and frameworks for calculating

the fog were laid out by Chaba. (Zhu, & Wang, 2016). Fog decreases computer congestion and latency in networks when cloud computing is pushed to the networks' edges. Fog computing is used to manage a decentralized and virtualized infrastructure. It connects the sensors and cloud computing data centers.

In certain use instances, the fundamental requirements of cloud computing cannot be met (Karimireddy & Bakshi, 2016). Using the EC model, this research explored how to extend cloud security to the network's periphery. The present research identified security-related dangers, practices, benefits, and drawbacks (Kaur & Malhotra, 2015) provided an example of the use of fog computing to intelligent transportation systems. That's the pinnacle of intelligent transportation use cases in VANET. Existing research has shown that cloud computing is inefficient for various VANET applications due to latency-sensitive needs and vehicle mobility. Here, an agent-based application strategy was used to implement a decentralized transport network.

For VANET security to be guaranteed, it is necessary to identify adverse communications, which point to undesirables with bad characteristics. This research (Lo & Tsai, 2016) offered a unique method for evaluating negative feedback based on meet-tables and cloud computing. Meet-Fog is the best choice for maximizing data storage efficiency in hybrid cloud and edge environments. Extensive information on the Fog and the technique used in meet-design is provided. The Meet-Fog models are therefore very precise and comprehensive. For the cellular vehicle network, Huang (Liang & Sheen, 2012) developed a revolutionary computing-based edge approach (connections). The available literature addresses the issues of complete service delivery and reduced failure rate. We're interested in Mobile Edge Computing Servers (MECS) that can be linked to a collection of base stations over a radio-access network. It also effectively manages a radio-based network and performs a variety of vehicle-related activities and services. To do this, the MECS employs traffic scheduling techniques and network slicing.

Because of the superior performance and accessibility of the MEC server, a specialized network service built on MEC was also implemented. As the MEC server's capabilities increased and road information became more readily available, a MEC-based, individualized network service was developed to take use of these new capabilities and improve reliability, portability, and usability.

Edge computing (EC) was suggested to provide flexible deep learning for the Internet of Things. There are several problems with the current methods to IoT edge computing (EC). In this study, we combine edge computing (EC) with deep learning to provide highly adaptable edge computing (EC). In this work, we employ a mix of agents and a novel offloading technique to boost the performance of IoT-deep learning using edge computing (EC) (EC). The suggested architecture has a more sophisticated IoT system paradigm, more adaptability, and functionality that is centered on the user (La & Cavalli, 2014). Intelligent transportation systems benefited from Hussain implementation of the deep learning paradigm, which allowed for reliable analytics to be provided at the network's periphery. Data was computed at the level of smart sensors at the roadside to address and overcome worries about dependability and ITS delays.

Intra-vehicle computers might implement a distributed edge computing (EC) architecture using deep learning techniques and ITSs. The proposed deep learning method acts as a reservoir for ITS edge analytics by equipping ITS devices with superior signal processing capabilities. Using edge computing (EC), Jalali were able to transmit safety signals across diverse VANETs (Malik & Panday, 2016). They developed broadcasting methods for safety-related messages based on the aforementioned premise. While the NRCR (Non- Redundant Communication Range) forms the basis of the proposed system, the scope of the research was limited to highway environments (NRCR). The proposed method for decentralized broadcasting makes use of local topological information to ensure that signals are sent securely and may be received with ease in both dense and sparse VANET settings (Mishra, Singh, & Kumar, 2016). The proposed approach was shown to be effective.

Mishra, Singh, & Kumar (2016) described an approach to optimizing message (i.e. information) cover in communications between urban vehicles. Until recently, 1-D V2V (Vehicle-to-Vehicle) communications scenarios have been the exclusive focus of attempts to expand road network coverage. To get the most out of the study, it was done in a two-dimensional setting. The most popular method is the Message Coverage Maximization Algorithm (MCMA). It examines the difficulties encountered while trying to get the best possible message coverage and roadside unit performance. Consideration was given to the volume of traffic on each route. For time-delay constraints inside, the results show that the suggested method enhances traffic flow following an accident. For more processing power, Mahmud (Prokop, 2011) suggested a vehicle-based edge computer (VEC). To illustrate the VEC architecture, this research makes use of services, applications, and communication in smart vehicles. Any technical questions that may arise with the VEC architecture may be answered by them.

Rajput, Abbas, Wang, Eun, & Oh (2016) presented fog-computing for real-time based VANET applications. In VANET systems, the vast amount of data generated by the roadside network platform requires the use of more conventional data storage, network, and processing facilities. The Virtual Control Node (VCC) serves as a data center, computing facility, and networking hub for VANETs. In this research, we presented a fog-computing-based application that uses VANET methods in real time. In their discussion of the 5G vehicle cloud computing system delved into the topic of motilities management (Sallam & A. 2015).

The level of the services offered by each vehicle varies. On the other side, attention must be paid to provider regulations and user requirements. This study developed a novel approach to VHO (Vertical Handover) management for 5G-VCC networks. The speed of the vehicle and other network elements were considered while deciding on a network. There are many different aspects of a network that may be measured, such as throughput, latency, packet loss, and jitter. Attributive language features and variable-order-of-operator processing (VHO) are used in the suggested method. The 5G-VCC system, which utilizes 3GPP Long Term Evolution (LTE) for both fixed and mobile applications, is where the suggested method finds its home (WAVE). In this approach, the proposed method improves the optimal connection score. Recent challenges with authentication in V2X communication were studied (Sari, Onursal, & Akkaya, 2015). Investigating V2X services and V2X communications was the focus of this study. Then, the benefits of V2X architecture and cellular networks were analyzed. They discussed several V2X dangers and existing V2X communication methods on the cellular network. An original vehicle sensor layout was proposed to track traffic conditions (Shakyawar & Tiwari, 2016). This approach might be used by MSaaS to determine whether they should provide their mobile devices' sensing capabilities as a service to other users. The results of the testing reveal that accuracy increased to 81.7%, network load decreased by 73.8%, and response times were cut down by 60.3%. Broadcasting cloud-based toll payment messages over VANETs is now possible (Shao, Lin, Lu, & Zuo, 2014) . The message covers a wide range of topics, such as travel delays, amusement, emergencies, and location-based tools and services. The secure authentication method advocated for uses encryption and decryption and is based on route authentication.

Certificate overhead management was adjusted to provide for more nuanced message distribution by allowing cloud architecture to provide integrity, verification, and secrecy. New objectives, such as learning how technology and performance interact when the tasks are similar and different, will be developed because of literature studies. According to Shakyawar & Tiwari (2016) MSaaS entails a mobile device with powerful processing capabilities and a base station that acts as a data relay node.

Objective
The objective of this research paper is to provide a mechanism to evaluate the efficacy of cloud and edge technologies based on a wide range of criteria, which may be used to determine the best practises for automotive networks. The research highlighted in this work also establishes the reduction in latency and server usage time of EC in comparison to cloud computing. This research output also saves space and resources on servers and in vehicles by making information available more widely.

Resource Allocation
Overview
In this article, we examine the many methods that have been developed for allocating resources in DSRC-based vehicular networks. These methods have mostly concentrated on various methods of allocating MAC parameters, channels, and rates. In what follows, we use these definitions to group together various strategies for allocating DSRC network resources causing a drastic slowing down of the network's performance. For instance, a fast vehicle's throughput could suffer in comparison to a slow vehicle's because the latter spends more time in the RSU's coverage area, giving it a greater opportunity to connect with it. To improve DSRC networks' dependability, throughput, and fairness, a number of research have focused on optimizing the MAC parameters involved. Specifically, by accounting for the average speed of cars in the network, an optimum choice on the minimal contention window (needed for every vehicle) has been established. To prove the efficacy of their approach, used a custom-built event-driven simulation software (written in C++) to model a V2I network with an IEEE 802.11p-based MAC layer and an 802.11a-based physical layer (Noori & Valkama, 2013). The average speed of the slow car was set to 60 kilometers per hour, while that of the rapid vehicle was set to 120 kilometers per hour. The data transmission ratio is shown to rise with increasing mean vehicle speed for the default DSRC method. Indeed, in this instance, the data transmission lowers because the residence time of slowly moving cars inside an RSU's coverage area diminishes. However, the contention window distribution approach described by Harigovindan. keeps the data transfer ratio roughly flat by giving slower and faster cars an equal opportunity of communicating with the RSU. Keep in mind that if there are a few fast cars and many slow vehicles, the suggested strategy may be unfair to the slow vehicles since they are more likely to incur

greater losses. Furthermore, when one lane of a highway is filled by a platoon of slow-moving cars and the next lane is occupied by a constant stream of quicker vehicles, the suggested approach would certainly produce injustice.

Rossi. (Vijayakumar, Azees & Deborah, 2016) presented a stochastic model to determine the maximum contention window based on the number of cars in the vicinity, with the goal of optimizing throughput among nearby vehicles. Network Simulator 2 (NS-2) simulations were run by the authors of (Vijayakumar, Azees, & Deborah, 2016) to test the validity of their proposed model for a road network with a single-lane, one-way road, and a total length of 5 kilometers. To run the simulation, it was assumed that each vehicle could roughly count the number of others nearby within interference range. Set the route loss exponent to 4 and adjust the transmission range to 100 meters.

To enhance the functionality of networks in highly mobile settings, two different dynamic Contention Window (CW) allocation strategies are presented in [49]. Both schemes dynamically allocate the contention window depending on the number of neighboring cars; the first uses a p-persistent based technique (Xiangjun & Tigang, 2010) and the second adapts the window based on the relative velocities of the other vehicles. All cars were equipped with the same 802.11p MAC settings, and speeds ranged from 60 to 120 kilometres per hour. Delivery rates and throughput in the network are shown in a comparison of their suggested designs. It has been shown that both approaches result in lower rates of packet collisions, leading to improved performance. Furthermore, each scheme offers improved performance in a particular setting. When there are a lot of cars in a network, for instance, the first method has a higher delivery ratio of packet. When the number of cars exceeds 80, the second approach provides superior network performance.

Designation of Critical Communications Paths
Orthogonal frequency bands are used by DSRC/WAVE to allow for multi-channel operation while still allocating an equitable number of channels to each message. Low latency, extreme reliability, and high priority processing is required for emergency communications. It is proved that its emergency PDR is greater than WAVE's PDR.

Assigning urgent messages to reserved channels in a high-traffic environment is a key reason why DMAE surpasses WAVE in delay performance.

Assigning Prices
Communication based on IEEE 802.11p offers various MCS, allowing for data speeds anywhere from 3 Mbps to 27 Mbps. Table II displays the transmission ranges and data rates (nominal and average effective data rates) for each MCS. Previous efforts on vehicle communications frequently assume a constant MCS for the sake of simplicity. Constant MCS may not be appropriate for varying traffic circumstances throughout varying stretches of road, which might degrade communication performance if used. When all nodes share the same channel conditions, the IEEE 802.11 MAC protocol guarantees that each node will have an equal chance to transmit. However, throughput-based fairness will result in significantly decreased aggregate throughput while operating in a variable channel situation and a crowded network. The scheme's overall throughput requirement is met by combining the transmission rates of many vehicles into a single channel, while the fairness criterion is met by regulating the sizes of the groups. Through the elimination of performance anomaly phenomena caused by different transmission rates in IEEE 802.11p multi-channel networks, system throughput is increased when OBUs with comparable transmission rates are grouped together. To reduce the amount of time it takes for the system to respond, the authors developed a network coding scheme based on a dynamic threshold. This scheme ensures that the most urgent request is always included in the coded packet and that the packet's transmission time is never longer than the deadline for the most urgent request. The length of time it takes to send a coded packet 4 relies on its size and the mode of coded signaling (MCS) chosen to provide the greatest data rate possible while still satisfying all requests contained within it. As a means of testing the efficacy of the suggested approach, we simulated a multi-RSU vehicle network in a city grid. We have used CSIM19 to develop the simulation model and have run simulations using the default parameters of MAC layer standards and the IEEE 802.11p PHY.

In order to simulate the vehicle's maneuverability, a Manhattan mobility model was used. Both response time and percentage of missed deadlines were used to evaluate the effectiveness of the proposed method. As can be seen in Fig. 5, there is a clear performance gap between the two MCS types when fixed MCS is used.
Data from simulated deployments demonstrates that the dynamic MCS scheme may enhance the system's capacity to serve requests on demand and decrease response times.

Data Analysis

An important aspect of 5G and later communication systems is their ability to serve a wide variety of vertical applications and use cases. Smart cities and homes, e-health, smart manufacturing, smart refineries and chemical plants, and Cellular V2X are all examples of vertical use cases (C-V2X). Many mobile operators have lobbied for C-V2X as part of the expansion of 5G NR and 3GPP's LTE (Zhang & Sun, 2016) because of its potential to provide a more profound and pervasive use of wireless communications.

Edge computing (EC) and cloud computing are the two main parts of the network paradigm that the VANET concept separates apart. The components of a VANET network are vehicle nodes, RSUs, and management authority. When vehicles (like cars) are in motion, the RSUs connect the cloud's infrastructure with the vehicles themselves by acting as gateway terminals. Fixed RSUs may be equipped with edge computing (EC) software, turning them into network nodes that serve as the network's front line and delivering edge-based services. Located on the farthest reaches of a network, edge devices are tiny data processing and storage units. Vehicles travelling via these servers will be required to register, and all edge servers will get the information (data) that has been registered or shared, enabling registered vehicles to move without re-registering thanks to edge device caches. Edge Sim and Cloud Sim are two examples of simulation technologies that may be used for this purpose. Beacon signals sent out by vehicles will be received by the closest edge server.

Metrics of performance	Edge	Cloud
Service-Time(ST)	1.052393	0.851403
The time of processing i.e. the time of processing(PT)	0.994514	0.175687
Delay	0.058764	0.675619
Server-Utilization(SU)	0.143946	0.06198

Table 1.System characteristics and simulation methods employed in the proposed system are listed

S No.	Simulation-Parameters	Tool-used in research /Values
1.	3-edge servers are configured.	Edge Sim software tool
2.	The cloud server's configuration	Cloud Sim software tool
3.	Vehicle count	25
4.	Simulation Time Vehicles' Average Speed vehicles' Registration Id	SC 01 to SA25
5.	Area for practice.	95 sec's
6.	The protocol is used for communication and routing.	95 to 150 kmph
7.	Designing and deploying a VANET topology	1000 m X1000m
8.	GUI	The LTE in both cases, V-AODV
9.	Three edge servers are configured.	Vanet Mobi Sim, & NS-3
10.	The cloud server's configuration	Java Programming Language

Table 2: Comparison Performance Measures were Compared

Performance measures	Edge	Cloud
Service-Time(ST)	1.202810	0.808413
The time of processing i.e. the time of processing(PT)	1.149105	0.157584
Delay	0.053613	0.650777
Server-Utilization	0.24385	0.071583

Table 3: Comparison Performance Measures were Compared.

In order to determine the shortest path between two roadside units, workers consult the MCMA lower limits and a pseudo ID stored on the closest edge server once every ten seconds. It's helpful for neighbours to know the present state of network topology responsiveness. When a car uses a Gateway Terminal, it is able to relay its destination and route information to the cloud. Each edge node stands for one of the cluster's leaders. All of the edge nodes collaborate to provide safety and other data about vehicles that leave their respective clusters at a

given time. By disseminating this data, we can relieve the load (overhead) of communities close to the point of arrival for the vehicle. When all of the edge servers share vehicle data, it reduces the chaos and duplication of data storage on the server and vehicle sides. Just one milligramme Vehicle networks are employed in both cloud computing and edge computing because to their high bandwidth, computation, and storage capacities (EC).

The VEC receives 1.09 percent of the system's service time (ST), 0.98.8 percent of the processing time, 0.07 percent of the delay time, and 43.9 percent of the server system's utilisation.
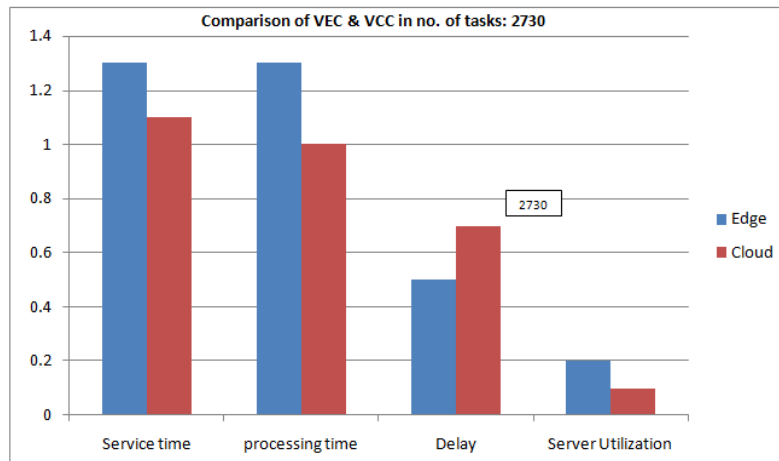
Fig. 1: Graph Showing VCC and VEC Task Comparisons
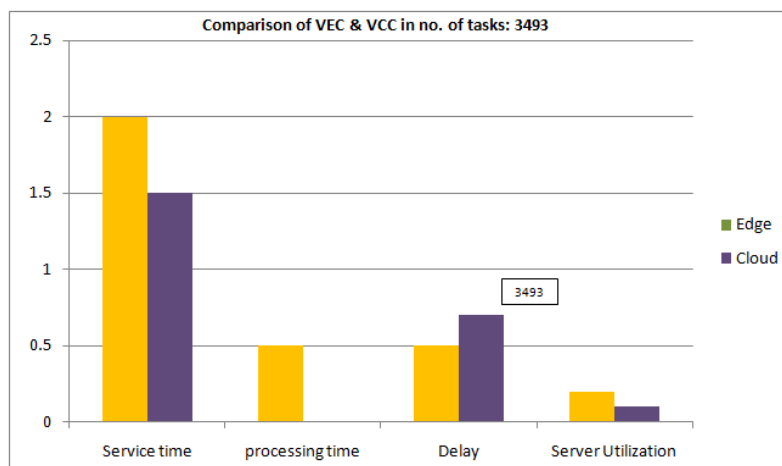
Fig. 2: Compared Graph Plot of VCC and VEC
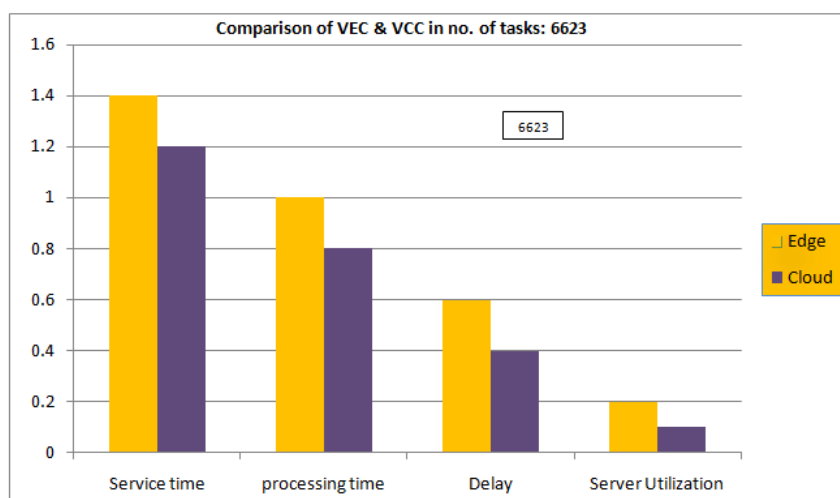
Fig. 3 shows a comparison between VEC and VCC across 37 different occupations using 6223 vehicles.

The time of service from the system, the time of processing, the lowest time of delay, and the maximum server utilisation are all best achieved using edge computing (EC) for 6223 workloads.

On display in Figure 3 are the evaluation parameters that were used to compare VEC and VCC over a variety of tasks (6223), using 37 vehicles. Edge computing (EC) was shown to have the quickest service time (ST), processing time, lowest delay time, and greatest server utilisation for a total of 6223 applications.

Figure 3 compares VEC and VCC in a variety of vocations (6223) with 37 cars. For 6223 workloads, edge computing (EC) offers the quickest time of service from the system i.e. time of service from the system i.e. time of service from the system i.e. service time (ST) , the time of processing, lowest time of delay, and highest server utilization.

Metric of performances	Edge	Cloud
1.Total time taken for service	1.043774	0.846578
2.The time of processing i.e. the time of processing(PT)	0.985218	0.122877
3. Time of Delay	0.05855	0.723701
4.Server-Utilization time	0.391902	0.1162

Table 4: Comparison of Performance Metrics.

Conclusion

After evaluating alternatives, the transportation sector has found that edge computing (EC) technology reduces lag time for applications running in vehicles' cloud networks and boosts server capacity for such apps. VANETs. Extremely high data transfer rates, low latency, and awareness of the surrounding environment are all advantages of vehicle-based networks. We investigated the availability of traffic data using virtual area network (VANET), cloud, and edge computing (EC) technologies. The simulation results were tabulated based on how the system proposed here was implemented using the Edge Cloud Sim and Cloud Sim modules. The results demonstrated that the proposed system outperformed cloud networks on all of the evaluated metrics, including latency and server utilisation. When comparing service and processing time, cloud networks are superior than their more conventional counterparts. If 5G is used for transportation networks, the system's edge-computing capacity may be increased to cut down on processing times and delays. Although edge computing (EC) won't be able to fully replace cloud networks, it will speed up both processing and communication.

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CORPORATE GOVERNANCE AND ECONOMIC PERFORMANCE – AN ANALYTICAL STUDY OF S&P BSE HEALTHCARE COMPANIES

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ABSTRACT
This paper aims to study the influence of corporate governance sub-indices on financial performance of companies listed on S&P BSE Healthcare index. To conduct the analysis, the influence of corporate governance sub-indices on the economic performance of companies listed on S&P BSE Healthcare index is being considered. Data of two years ending 2020 and 2021 have been considered for analysis. Various statistical tests like correlation, panel data regression, hausman test etc. are used to study the impact. To select between fixed and random effects models in panel data regression Hausman test is used. The results reveal few sub-indices have an impact on the accounting proxies namely ROA, ROE and EPS and market measures namely P/E and EV/EBITDA.
Keywords: Economic Performance, ROA, ROE, P/E, EV/EBITDA, Ownership patterns, corporate governance index, Hausman Test, Panel Data Regression, Kruskal Wallis Test, Corporate Governance Sub-indices

Introduction

Corporate Governance is based on three pillars: responsibility, clarity, and justice. Companies follow corporate governance norms laid out in Clause 49 of the listing agreement laid out by SEBI. Remarkable changes have been suggested by the new Companies Act, 2013 like mandatory disclosures namely related party transactions, formation of risk management committee and so on. Listed companies follow these norms and report it in the corporate governance section in their annual reports. Companies are considered transparent if they report their functioning in a manner laid down by clause 49 and companies act, 2013. Hence adherence to these norms is of great importance to the companies.

According to Arora, (2017), greater promoter control in businesses may result in reduced returns to other stakeholders if a firm's resources are diverted for personal financial interest. On the contrary few researchers are of the view that higher promoter stake indicates long term vision of the management for the betterment of the company.

This study focuses on the impact of corporate governance on financial performance measures namely ROA, ROE and Basic EPS which are accounting measures and market measures like PE and EV/ EBITDA. In the past studies have been carried out on traditional measures and few studies have focused on market measures like EV/ EBITDA and PE. Hence this study is an extension of studies in the past. It will help the researchers in understanding the influential role played by corporate governance sub-indices in accounting as well as market measures of economic performance of S&P BSE Healthcare companies.

The study will be further elaborating on the research done in the past, objectives of carrying out the research, empirical tools for data analysis, findings, conclusions, and suggestions.

Review of Literature

In the past studies have focused on analyzing how ownership patterns affects economic performance of listed companies (Karaganda and Sreeram, 2018), hence studying how ownership patterns affects corporate governance index will provide insights on the role played by Managerial decisions on corporate governance practices. Companies having different ownership patterns It is affirmed that there exists a significant difference in financial performance of (Raju and Joshi, 2016).

Jeet (2018) in its study on ownership patterns and financial performance affirms the existence of positive influence of ROE on ownership patterns of companies. Fatmawati (2018) revealed that corporate governance affects financial performance in a positive way for state owned companies in Indonesia. The study was divided

into two parts where the influence of corporate governance index on economic performance of SOEs and influence of sub-indices on financial performance of SOEs was studied for Indonesian firms. The results affirmed that sub-indices like Board committees, Nomination and remuneration committee, risk management committee influences firm's performance positively.

Pandey & Sahu (2017) also examined the influence of corporate governance on a company's economic performance measured through accounting proxies like ROA, Tobin's Q, ROE. The study affirms existence of a significant positive relationship among ownership patterns and economic performance.

Srinivasan & Srinivasan (2011) have revealed that there are various themes that have been studied in international journals about corporate governance and very limited themes have been covered in Indian Journals for Indian context. Thus, research is required to study various dimensions of corporate governance in the Indian context.

The focus of previous studies has been on ownership patterns and firm performance, but corporate governance and ownership pattern is not examined.

Financial performance is the key indicator of a firm's wellbeing. Previously studies have taken place where the influential role played by corporate governance on the economic performance of the companies have been analyzed.

Bhagat & Bolton, B. (2008) in its research on corporate governance affirms the existence of positive relation between several accounting measures of economic performance of companies and good governance performed by the companies. Market Performance of companies is impacted by the corporate governance of the firms. This can be seen from the study done by Sarkar (2012). A corporate governance index was created for listed large Indian companies. The paper studied the corporate governance practiced by Indian companies and revealed improvement in practices of firms. The study examined the relationship of corporate governance index on the market performances of entities and confirmed a positive relation between the two.

Varshney (2012) says that influence of corporate governance index and firm performance revealed a positive strong association between CGI and company's performance where company's performance was evaluated through EVA and Tobin's Q. In the study the firms were categorized into high index firms, low indexed firms. The results revealed a strong positive relationship between corporate governance and firm performance.

Corporate governance lies on the premise of disclosure. Hence, a study by John and Ben (2014) on influence of corporate governance index and economic performance was carried out in which the index was created using various measures like remuneration, board size, ownership pattern, shareholders rights, and whistle blower policy and audit qualification. After using regression and correlation it was found that there is a significant association between voluntary disclosures and firm performance.

Javaid & Saboor (2015) carried out a study where influence of corporate governance was studied on the monetary performance measures. The study affirmed the existence of a positive strong relation between corporate governance and economic performance measured through market and accounting measures.

The influential role played by corporate governance on the economic performance of the firms have been studied, but now the companies are moving more towards sustainability and environmental wellness. Hence a corporate governance index was created by Sar (2018), to study its impact on economics, environment, and social equity performance of the companies. The index was created using 49 measures on the five broad categories namely board structure, related party transactions, shareholders rights and procedures. The result revealed that corporate governance has positive relation with economic performance, equity performance and environment performance.

A similar study carried out by Andrews (2016) in Ghana for listed Ghanaian firms also revealed a strong and positive correlation between economic performance and corporate governance index. The study was carried out by analyzing the governance scores of firms pre and post the Ghanaian corporate governance code and its influence was studied on the economic performance of companies.

Similar results of CGI on economic performance were revealed by Arora (2017). In her study, the corporate governance index was created using internal and external governance instruments and its effect was studied on

various financial performance parameters RONW, ROA and EPS. The result revealed the positive association of CGI with all the financial parameters except EPS.

Kaur and vij (2018) carried out a study on defining the influence of corporate governance on the economic performance of banks. The study too revealed that corporate governance influences the financial performance of banks positively.

Research Gaps Identified:
Many studies have been carried out in the past to understand the relationship between corporate governance and financial performance of companies, but limited studies are available on sectoral indices. Studies carried out in the past only analyzes either corporate governance Index and financial performance or ownership patterns and financial performance. Impact of Corporate Governance sub-indices on economic performance of companies is rarely examined in the Indian context. This gap would be bridged in this study by analyzing the influence corporate governance sub-indices have on the financial performance of S&P BSE Healthcare sector companies.

For measuring economic performance accounting proxies   ROA, ROE and EPS are considered and market proxies P/E and EV/ EBITDA are considered. Previously researchers have focused on traditional measures and few studies have focused on market measures like EV/ EBITDA and P/E. It will help the researchers in understanding the role played by corporate governance sub-indices in influencing on accounting as well as market performance proxies of S&P BSE Healthcare index companies.

Methodology
Objectives:
- ➢ To develop a new index on corporate governance.
- ➢ To understand if corporate governance sub-indices influence the accounting performance of companies listed on S&P BSE Healthcare index.
- ➢ To understand if corporate governance sub-indices influence the market performance of companies listed on S&P BSE Healthcare index.

Sampling Design:
Healthcare sector is chosen for analysis as this is one of the largest sectors contributing towards employment generation of the country. [1] BSE follows a methodology to select the companies to be included in different sectors based on the macro-economic indicators and market capitalization. Hence for the said sector S&P BSE Healthcare index has been chosen for analysis. There are 70 companies listed on S&P BSE Healthcare sector index as on 1.4.2021. All the companies in the sector are considered, thus the sampling design is census sampling.

Data Collection and Index Construction
The Data has been extracted from the Annual reports of S&P BSE healthcare sector companies for the year ended 2020 and 2021. The corporate governance index has been calculated with the help of seven sub-indices namely: 1. The Board sub-index, 2. Audit Committee Sub-index, 3. Stakeholders Committee sub-index 4. CSR Committee Sub index 5. Disclosure sub-index 6. Shareholders Sub-index and 7. Risk Management Committee Sub-index. The companies can score maximum 44 marks as there are 44 points comprising all the sub-indices which are elaborated in Appendix 1. A company gets 1 if a criterion is fulfilled else it gets 0.

The total of all the sub-indices is detailed below:

Sub-index	Maximum Points that a company can score
Board Sub-index	6
Audit Committee Sub-index	5
Stakeholders Committee sub-index	6
CSR Committee Sub-index	5
Disclosure sub-index	10
Shareholders Sub-index	8
Risk management Committee Sub-index.	4
Total (Corporate Governance Index)	44 points

Table 1 Constituents of Corporate Governance index

Economic Performance Variables:

The performance variables have been considered based on market value estimates and based on the accounting estimates. The variables like ROA, ROE and basic EPS have been considered for accounting-based measures and EV/EBITDA and P/E has been considered for market-based measures. These ratios have been extracted from moneycontrol.com and verified from the annual reports.

The study can be elaborated with the help of following diagram.

Corporate Governance sub-index and Economic performance:
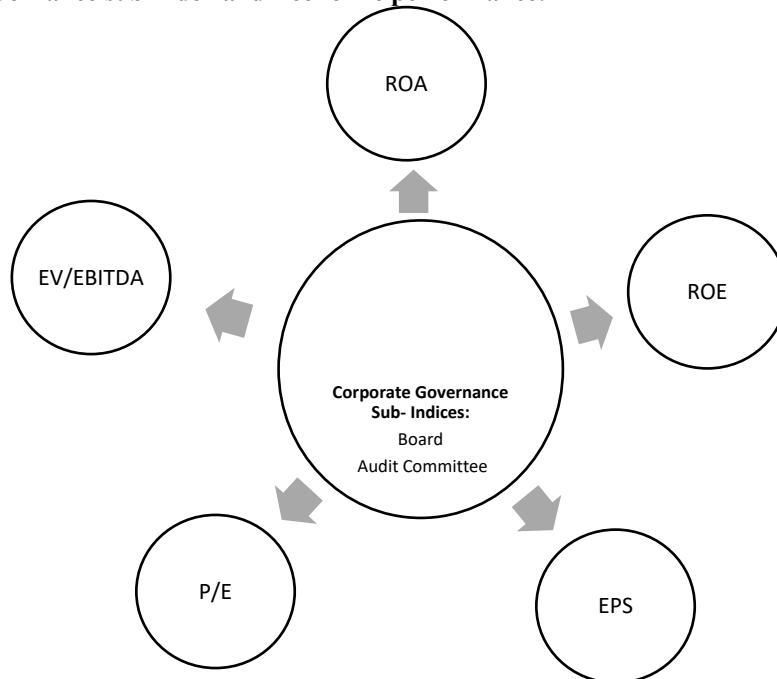
Figure 1: Impact of Corporate Governance sub-indices on Financial Performance of companies listed on S&P BSE Healthcare index.

Statistical Tools used: Statistical analysis includes descriptive and inferential statistics. In inferential statistics following tests are used:

1. Karl Pearson's correlation to check whether corporate governance sub-indices and economic performance variables are associated.
2. Multicollinearity (VIF) to check collinearity among independent variables,
3. White test to check the homoskedasticity of data.
4. Fixed effects Random effects model to carry out panel data regression, for checking the influence role played by corporate governance sub-indices on economic performance of companies.
5. Hausman test to choose between fixed and random effects model

Hypothesis:

$H_0 1$: Corporate Governance sub-indices do not affect ROA of S&P BSE Healthcare Index companies significantly.

$H_0 2$: Corporate Governance sub-indices do not affect ROE of S&P BSE Healthcare Index companies significantly.

$H_0 3$: Corporate Governance sub-indices do not affect EPS of S&P BSE Healthcare Index companies significantly.

$H_0 4$: Corporate Governance sub-indices do not affect P/E of S&P BSE Healthcare Index companies significantly.

$H_0 5$: Corporate Governance sub-indices do not affect EV/EBITDA of S&P BSE Healthcare Index companies significantly.

Based on the hypothesis the following equations have been Developed:

$ROA_{it} = \beta 0 + \beta 1*BI_{it} + \beta 2ACI_{it} + \beta 3SC_{it} + \beta 4CSRC_{it} + \beta 5DC_{it} + \beta 6SHI_{it} + \beta 7RM_{it} + \varepsilon_{it}$

$ROE_{it} = \beta 0 + \beta 1*BI_{it} + \beta 2ACI_{it} + \beta 3SC_{it} + \beta 4CSRC_{it} + \beta 5DC_{it} + \beta 6SHI_{it} + \beta 7RM_{it} + \varepsilon_{it}$

$EPS_{it} = \beta 0 + \beta 1*BI_{it} + \beta 2ACI_{it} + \beta 3SC_{it} + \beta 4CSRC_{it} + \beta 5DC_{it} + \beta 6SHI_{it} + \beta 7RM_{it} + \varepsilon_{it}$

$PE_{it} = \beta 0 + \beta 1*BI_{it} + \beta 2ACI_{it} + \beta 3SC_{it} + \beta 4CSRC_{it} + \beta 5DC_{it} + \beta 6SHI_{it} + \beta 7RM_{it} + \mu_{it}$

$EV/EBITDA_{it} = \beta 0 + \beta 1*BI_{it} + \beta 2ACI_{it} + \beta 3SC_{it} + \beta 4CSRC_{it} + \beta 5DC_{it} + \beta 6SHI_{it} + \beta 7RM_{it} + \mu_{it}$

Where β0 is the overall intercept, ROAit, ROEit ,EPSit, PEit and EV/EBITDAit are the dependent variables, BI = Board Sub-Index, ACI is the Audit Committee Sub-Index, Sc is Stakeholders Committee Sub-Index, CSRC is CSR Committee Sub -Index, Dc is Disclosure Sub- Index, Shi is Shareholders Sub-Index and Rm is Risk Management committee Sub- Index. and μit is the errors between firms, εit errors within entities.

Data Analysis
Corporate Governance sub-indices and Economic Performance of S&P BSE Healthcare Companies.

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
ROA	140	-115	39	6.76	16.612
Basic EPS	140	-32	325	31.03	48.795
ROE	140	-110	52	11.96	18.732
EVEBITDA	140	-30	123	15.15	16.197
PE	140	-580	270	20.90	67.914
Board Sub-Index	140	4	6	5.02	.640
Audit Committee Sub-Index	140	2	5	3.96	.790
Stakeholders Committee Sub-Index	140	3	6	5.22	.787
CSR Committee Sub - Index	140	0	5	4.34	.903
Disclosure Sub- Index	140	5	9	7.40	.794
Shareholders Sub-Index	140	2	7	4.15	1.079
Risk Management committee Sub- Index	140	0	4	2.66	1.050
Corporate Governance Index	140	52	89	74.45	5.916
Valid N (listwise)	140				

Table 2 Descriptive Statistics

The descriptive statistics of Corporate Governance index, its sub-indices and economic performance parameters is reported in the table above. CGI for companies listed on BSE healthcare index ranges between 52 to 89 with 74.45 as a mean and standard deviation of 5.916% indicating less variance in the mean of selected firms. Board Sub -index values range between 4 to 6 with a mean value of 5.1033. Audit committee Sub- index value ranges between 2 to 5 with mean value of 3.96. Stakeholders committee Sub- index ranges between 3 to 6 with a mean value of 5.22. CSR Sub- index ranges between 0 to 5 with a mean value of 4.34. Disclosure Sub- index ranges between 4 to 9 with a mean value of 7.4835. Disclosure Sub- index ranges between 5 to 9 with a mean value of 7.40. Shareholder Sub-index ranges between 2 to 7 with a mean value of 4.15 and standard deviation of 1.079. Risk Management Committee Sub-Index ranges between 0 to 4 with a mean of 2.66 and standard deviation of 1.050.

Correlations							
	Board Sub - index	Audit committee Sub-index	Stakehol der_Com m Sub-index	Disclos ure Sub-index	CSR Committe e Sub-index	Shareholder Sub- index	Risk_Manage ment Committee Sub- index
ROA	-.163	.100	.009	.142	.352**	.105	0.063
Basic EPS	-.073	.111	.004	.130	.230**	.199*	.217**
ROE	-.175*	.081	.018	.165	.435**	.117	.165
EV/EBITD	-.203*	-.114	-.041	.025	.116	.199*	.116

A							
PE	.043	.090	.084	.135	.119	.002	-.004
** Significant at 0.01 level (2-tailed).							
* Significant at 0.05 level (2-tailed).							

Table 3 Correlation

Correlation is significant between Board Sub-index, ROE, EV/EBITDA and Audit committee index as seen above. This shows the impact of Board Composition and decisions through Board meetings on the profitability of the Company measured through ROE and Enterprise Value. A significant correlation can be seen between Shareholders Sub -Index Basic EPS and EV/ EBITDA which reflects that the measures taken by the companies like conducting meetings on stipulated time providing proxy and e voting facilities and other such measures influences EPS and EV/EBITDA of the companies. CSR Sub- index has a significant correlation between ROA, ROE and Basic EPS. This can be related with profitability as CSR activities carried out by the companies are from the profits of the companies due to the profitability measured through ROE, ROA and Basic EPS. Risk management committee Sub- index is significantly correlated with basic EPS at 1% significance level. Shareholders Sub- index is significantly correlated with basic eps at 5% significance level.

Before checking the existence of influence of CGI sub-indices on economic performance of companies it is important to check if there exists multicollinearity amongst the independent variables and whether the data is stationary.

1. Multicollinearity: This is checked when there exist multiple independent variables. After checking multicollinearity, it was found that the mean variance inflation factor (vif)of the data was 1.01 indicating that there exists no multicollinearity in the data.

2. Unit root test is used to check if the data is stationary, after applying Unit Root test it is found that the data was balanced. To validate the results White test is used, results for the same is as listed below

Source	chi2	df	p
Heteroskedasticity	54.66	43	0.1094
Skewness	10.08	8	0.2592
Kurtosis	1.57	1	0.2098

Table 4   Cameron & Trivedi's decomposition of White test

Since the p value is more than .05 null hypothesis is accepted which means the data is stationary. Since both the conditions of nonexistence of multicollinearity and stationery of data is satisfied further analysis of regression is carried out.

It is important to choose between the OLS, Fixed and Random Effects model to estimate the influence of the predictor variable on outcome variable. OLS Estimator does not produce fruitful results if the data is panel data. Hence to carry out further research PANEL DATA Regression is used. Under the Panel data fixed effects and random effects model is used. To choose between fixed effects and random effects Hausman test is used. The results of Hausman test comes out to be following:

Test Statistic	ROA	ROE	EPS	P/E	EV/EBITDA
P value	0.0976	0.4543	0.4049	0.0170	0.0258
Chi2	12.09	6.76	7.23	17.06	15.93

Table 5 Hausman Test results

Since the p value is more than.05, for ROA, ROE and EPS variables, the null hypothesis will be accepted which means the random effects model results are accepted for the said variables and for P/E and EV/EBITDA the p value is less than .05, hence fixed effects model will be accepted for them. The results of the random effect and fixed effects model are shown in Table5.

The panel data results for healthcare sector using Random effects are as following:

	ROE (RE)	EV/EBITDA (FE)	PE (FE)	ROA (RE)	EPS (RE)

BI	-2.795	-0.0104	15.21	-4.480***	-8.261
	(-1.24)	(-0.00)	(1.00)	(-3.44)	(-1.71)
ACI	0.872	-6.094*	-30.97*	0.150	3.551
	(0.47)	(-2.40)	(-2.42)	(0.14)	(0.89)
DI	1.924	3.891	22.85	1.438	5.898
	(1.05)	(1.54)	(1.79)	(1.33)	(1.48)
CSRI	6.614***	10.12**	6.456	1.227	6.066
	(3.75)	(3.44)	(0.44)	(1.04)	(1.45)
SHI	1.276	1.486	-4.822	0.232	6.871*
	(0.92)	(0.75)	(-0.48)	(0.28)	(2.23)
RMCI	1.388	0.693	-25.56**	0.278	1.572
	(1.01)	(0.37)	(-2.72)	(0.35)	(0.53)
_cons	-29.37	-41.32	-41.64	10.99	-44.22
	(-1.52)	(-1.40)	(-0.28)	(0.90)	(-1.01)
N	140	140	140	140	140
R^2	0.036	0.300	0.180	0.189	0.066
adj. R^2	-1.093	-0.520	-0.782	-0.760	-0.958
F	0.402	4.573	2.337	2.494	1.352
P	0.000398	1.65e-09	0.000311	0.00822	0.00849

t statistics in parentheses, Re = Random Effects and FE = Fixed Effects.
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 6 Results of Random Effects and Fixed Effects Model

From the above table it can be seen that the Board sub-index has a negative impact ROA. A 1% change in Board sub-index will lead to a negative change of 4.48%. The R^2 indicates a 18.9% change in financial performance can be explained by corporate governance sub-indices. CSR Sub-index affects ROE and EV/EBITDA. A 1% change in CSR sub-index leads to 6.614% change in ROE and 10.12 % change in EV/EBITDA. The Audit Committee sub-index affects PE   negatively. Thus a 1% change in the audit committee sub-index will lead to a -30.97% change in the P/E ratio of the company. Thus, meetings conducted in an audit committee having financially literate members in an audit committee affects the P/E ratio of the companies. Risk management committee sub-index affects the P/E ratio significantly. Shareholders sub-index affects EPS of the companies positively. A 1% change in shareholders sub-index leads to 6.871% change in EPS of the companies. Thus, measures taken by the company for shareholders like conducting AGMs on stipulated time, all board members attending the board meetings and providing suggestions impacts the earnings of the company and ultimately the EPS of the company.

Results And Discussion
From table 6 there is a significant impact of the Audit Committee Sub- index on EV/EBITDA. Auditors play an important role in an organization which can impact the enterprise value of the firm. CSR Sub- index significantly influences EV/EBITDA, as CSR activities indicate that the company is involved in social causes and due to the increased awareness of the shareholders, companies with an active social environment are preferred.

Audit Committee Sub- index has a significant impact on P/E which indicates that having an Audit committee and Directors having knowledge about the company will impact the financial performance of companies measured through P/E ratio.

Risk Management Committee Sub- index has a significant impact on P/E. Hence having a risk management committee is impacting the market value of the company indicating that the company is taking adequate measures to mitigate the risks involved in the businesses.

Board Sub- index has a significant impact on ROA as per Fixed effects model indicating that the timely meeting conducted, and the decisions of the board have an impact on the profitability of the company measured through ROA. Shareholders Sub- index (SHI) has a significant impact on EPS which can be seen from table 5. Hence there are various corporate governance sub-indices that influence the economic proxies of the companies.

The hypothesis can be summarized as following:

DV / IV	ROA	ROE	EPS	PE	EV/EBITDA
Board INDEX	Reject $H_0 1$	Accept $H_0 2$	Accept $H_0 3$	Accept $H_0 4$	Accept $H_0 5$
Audit Committee	Accept $H_0 1$	Accept $H_0 2$	Accept $H_0 3$	Accept $H_a 4$	Reject $H_0 5$
Disclosure index	Accept $H_0 1$	Accept $H_0 2$	Accept $H_0 3$	Accept $H_0 4$	Accept $H_0 5$
CSR Committee	Accept $H_0 1$	Reject $H_0 2$	Accept $H_0 3$	Accept $H_0 4$	Reject $H_0 5$
Shareholder Index	Accept $H_0 1$	Accept $H_0 2$	Reject $H_0 3$	Reject $H_0 4$	Accept $H_0 5$
Risk Management committee	Accept $H_0 1$	Accept $H_0 2$	Accept $H_0 3$	Reject $H_0 4$	Accept $H_0 5$

DV= Dependent Variable, IV = Independent Variable
Table 7: Summary of Hypothesis Testing

Conclusion

Corporate governance plays a very important role in shaping an organization's future, Hence the impact of various sub-indices on financial performance indicates that shareholders prefer to invest in companies that actively contribute towards social causes, hence the companies having good correlation between CSR index and financial performance substantiates the same. Thus, the impact of various sub-indices on financial performance like ROA, EPS, P/E and EV/EBITDA is significant for different sub-indices.

This research focuses on the impact of various corporate governance subindices on S&P BSE Healthcare index. Further research can be conducted to understand if there is the same impact of these sub-indices on financial performance of other sector indices as well listed on BSE and NSE. Conducting a sectoral study helps in understanding the practices followed by the said companies. Research has been carried out to study the influential role played by the corporate governance index on the economic performance of the companies listed on Sensex, Nifty Fifty and BSE 100 companies. More S&P sub-indices can be considered to understand the impact of corporate governance on financial performance of the companies.

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Appendix I

Sr. No.	Variable	Measurement
1.	Board meetings held	Minimum 4 and above =1 else 0.
2.	Number of directorships	Max eight directorships from 2019 and 7 companies from 2020
3.	Appointment of Independent Directors	The company appoints an independent director through shareholders. then 1 else 0.
4.	Women on Board	If the company has a woman director on the board then it gets 1 else 0.
5.	Succession Planning	The Board has a clear mention about the succession planning =1 else 0
6.	Performance evaluation of Non executive directors	The evaluation of performance of Non-executive directors is mentioned then 1 else 0.

1. Board Sub Index

Sr. No.	Variable	Measurement
1.	Members as Independent Directors	If 2/3rd of the members are independent directors then 1 else 0.

2.	Chairperson as an Independent director	The chairperson of the committee is an independent Director then 1 else 0.
3.	Meetings of Audit Committee	The committee meets at least 4 times a year then 1 else 0.
4.	Members Financially literate	All the members of the Audit committee are financially literate =1 else 0.
5.	Fees paid	The company discloses fees paid to external auditors=1 else 0.

2. Audit committee Sub index:

Sr. No.	Variable	Measurement
1.	Chairperson	Chairperson is a non executive director then 1 else 0.
2.	Presence in AGM	The chairperson is present in an AGM then 1 else 0.
3.	Meeting	The committee meets at least once in a year.
4.	Composition	At least 3 directors and 1 should be an independent director.
5.	Number of complaints received and redressed	If the company resolves all complaints then 1 else 0.
6.	Company has a policy at place to handle investor grievances	The company has clearly mentioned the policy of handling grievances will get 1 else 0.

3. Stakeholders Relationship Committee Sub Index

Sr. no.	Variable	Measurement
1	Presence of committee	The committee exists then 1 else 0.
2	Existence of a CSR policy	IF the CSR Policy Exists =1 else0
3	Amount spent / allocated for csr activities	Amount spent on CSR is mentioned = 1 else0
4	Activities conducted mentioned in the CSR policy	Activities are mentioned =1 else0
5	Good Corporate citizen	The company spent amount on CSR even if there are no profits= 1 else 0

4. CSR Committee Sub Index

The following points are considered for the disclosure index:

Sr. No.	Variable	Measurement
1.	Related Party Transactions	The company discloses all the transactions with the related parties.
2.	Director's Remuneration	The company discloses the remuneration paid to directors and key managerial personnel get1 else 0.
3.	Whistle Blower policy	The company has a well defined whistle blower policy =1
4.	Unmodified report of the Auditor	The Auditor has given its unmodified opinion in its audit report for financial statements=1 else0
5.	Supplier Selection	The company has cleary mentioned about the procedure adopted to select the suppliers of the company gets 1 else 0
6.	Disclosing non financial information	Like: Environmental issues

		Business Model, Business strategy, Capacity utilization
7.	Data Protection and Privacy	The company discloses policy about data policy and protection =1 else0
8.	Shareholding key management personnel	The company has clearly revealed the shareholding pattern with the details of shares held by KMPs =1 else0
9.	Reporting of Internal Auditor	The company gets 1 if the internal auditor reports directly to the audit committee else 0.
10.	Compliance statement	The company contains a statement of compliance with respect to compliance with Corporate governance gets 1 else 0.

5. Disclosure Sub Index:

Sr. No.	Variable	Measurement
1.	Conduct of AGM	The AGM was conducted within 4 months of the year end then 1 else 0.
2.	Shareholders Information	The company sends information to the shareholders for AGM.
3.	Proxy and e voting facility	The company provided this facility =1 else0
4.	Board members present	If all the members were present then 1 else0
5.	Half yearly results	The company discloses Half yearly financial results to its shareholders =1 else 0
6.	Investor relations team	The company has an investor Relationship team =1 else0
7.	Investor education program	The company conducts investor awareness programs -1 else0
8.	Shareholder Participation through teleconferencing/ video conferencing	The company facilitates participation in the AGM through teleconferencing/ videoconferencing.

6. Shareholder Sub Index:

Sr. No.	Variables	Measurement
1.	Presence of the Committee	The committee exists
2.	Members	2/3rd Independent Directors
3.	Meeting	Once a year
4.	Future probable risks in MD&A	There is a clear description of future probable risk that the company might face.

7. Risk Management Sub Index

CUSTOMERS' IMPULSE BUYING BEHAVIOR AND THE IMPACT OF VISUAL MERCHANDISING IN STAR BAZAAR'S CHAIN STORES IN PUNE CITY

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ABSTRACT

Impulse buying is when a purchase is made without any prior planning. Both internal and external factors, including visual merchandising, demographics, and socioeconomic background of the consumers, have an association with impulsive buying. The examination of the literature indicates that visual merchandising has long been considered a marketing tactic in the retail industry and that it significantly influences impulsive purchase behavior. So, with reference to the organized retail sector, the current paper attempted to analyze the key drivers of visual merchandising and the association of these determinants with the impulse buying behavior. Consumers of Star Bazaar have used it as a case study and conducted an extensive study utilizing a representative sample of these customers to determine the influence of their purchasing behavior when shopping at Star Bazaar. The researchers have identified four main factors of visual marketing in order to achieve the specified objectives. They are the eye-catching product display, the atmosphere within the store, and the current day's deals. The descriptive character of the research contributed to the conceptual development of clearly defined priorities and the dissemination of sufficient data that the researcher believes will aid in retailers' decision-making. 520 respondents were utilized to gather information structured questionnaires and evaluate the association of visual merchandising with the impulse buying behavior of Star Bazaar customers. The study employed a convenient sampling method, and attention was taken to ensure that the respondents were as diverse as possible. Cranach's coefficient, which was produced to assess the dependability and internal consistency of the replies, was used to measure the validity of the questionnaire. The data was examined with the aid of SPSS software to make drawing conclusions simple. Demographic factors were found to have significantly affected respondents' impulsive purchasing behavior. The main factors that influenced the responders, according to the regression results, were the attractive product display, the atmosphere within the store, and the day's special offers.

Keywords: Retailing, Visual merchandising, organized retail, impulse buying, consumer behavior, retail

Introduction

Today, marketing management plays an important role in the improvement of business of an organization. An easy, effective, and updated marketing system improves the organization's sales. An Increased sale also increases revenue of the business unit. Marketing includes all activities related to the delivery of goods from the place of production to the final consumer.

Marketing management is not a new idea from this century; rather, it dates to the beginning of time. At first, trade was merely a barter system. During this time, local markets were developed. That market received goods from nearby retailers. People considered a common medium of exchange because of the difficulties encountered in the exchange system at the time of shopping. They added a variety of metals: The phase of trade, which is the essence of marketing, was accelerated by the appearance of money. The marketing system became more and more complicated after the Industrial Revolution.

The market system underwent revolutionary shifts in production volume, technique, and methods during the industrial revolution. Mass consumption led to mass production the commodities, which in turn led to a newer marketing strategy to enhance revenue. Marketing is the channel through which an organization can adapt its capabilities to meet the needs of its customers during shopping. Beginning with customer needs and ending with customer satisfaction is modern marketing management.

Customers want to shop in a comfortable shopping environment. The physical environment of the store is referred to as the shopping atmosphere or environment. The atmosphere, lighting, music, signage, store layout, and many other aspects of the shopping environment have a significant impact on customers shopping. While some of these components have an impact on consumer behavior, the majority of them affect buyers' emotions, thinking, and physiological state. These elements have the potential to elicit a more immediate response from customers without compromising their mental or physical well-being.

Customers' perceptions of the shopping environment are a major factor in their decision to spend more time and money in a store than they had anticipated before shopping. Focusing on the idea of visual merchandising is the most effective strategy for achieving this goal to enhance revenue. Visual merchandising is the placement of a product or brand in a store and at the point of sale to communicate visually in the design of the environment. It is widely acknowledged as a successful visual based merchandising strategy for increasing sales.

Literature Review
Dash, (1974), discovered that the amount of pre-purchase brand knowledge affected the type of store chosen in a study of store choice behavior among consumers of audio equipment. Higher pre-purchase knowledge shoppers tended to frequent specialist stores, while lower pre-purchase information shoppers tended to frequent department stores. Customers' adoption of a risk-reduction strategy with reference to their upcoming purchase is primarily to blame for this.

Wulf (1999) asserts that the task's nature helps distinguish between various store options. They examined how customers choose which stores to use for a range of tasks that respondents listed, such as making urgent purchases, purchasing large quantities, tackling difficult tasks, making routine purchases, and gathering ideas. The salience ratings of the chosen stores varied depending on the task the shopper wanted to complete. Furthermore, it has been found that the context influences how salient the retailers are.

Tausef (2011) noted impulsive consumer purchases of FMCG goods. The independent variables are classifications of gender, age, educational attainment, and income, and the dependent variable is FMCG impulse purchasing behavior. He selected a sample of 160 respondents from Jodhpur, an Indian city. He employed factor analysis as a statistical technique (SPSS version 16). His research found that customers of different age's groups, genders, and levels of education had significantly different impulse buying patterns and significantly different impulse buying behaviors.

Randhawa & Saluja (2017) found visual merchandising is what a customer sees both inside and outside the business that makes them like it and gets them to pay attention, be interested, want to do something, and act quickly.

McGoldrick, (1990) & Marsh, (1999) found Because of the intense competition in the market, retailers are unable to distinguish their brands based on the goods they sell or the customers they serve. Color, lighting, and visual merchandising have always been considered to have a direct impact on consumer purchasing decisions. The emphasis shifts from in-store product displays to flat-screen displays to sensory elements that appeal to the customer's senses, such as video and graphics, music, smells, lighting, and flooring, to capture the brand's personality and create a unique shopping environment.

Mahmood and Ahmadinejad (2011) investigated how store environment stimuli and contextual factors contribute to impulsive purchasing. He used the store environment, promotions, product viewing, and the availability of money as the independent variables, with impulse purchases as the dependent variable. He used the coefficient of variance as a statistical tool on a sample of his 329 clients who went to Iranian malls. His research shows a strong correlation between visual merchandising and store environment.

Kenhove (1999) found situational factors, such as time restraints and whether or not to purchase as gifts rather than for oneself, may influence the retailer of choice and the salience of a feature. It is also advised that each visit should focus on context influence. As a result, depending on the circumstances, some customers may change their choice. The competitive environment, the individual's situational environment, and the shopping occasion are three categories into which these situational factors can be divided.

With reference to the retail chain stores of Star Bazaar in Pune, the current study paper's objective is to investigate how visual merchandising techniques influence customers' impulsive purchasing decisions. As a result, a review of the pertinent literature provides information about the knowledge gap in the chosen field of study:

(i) The majority of research on the topic at hand, visual merchandising techniques and their influence on impulsive purchasing, has focused on western and developed nations, paying little attention to emerging markets like the organized retail chains in India.

(ii) As a developing economy, India exhibits a number of cultural variations, which have a big impact on consumers' impulsive purchasing habits. Therefore, the goal of the current study is to comprehend how demographic factors affect the selected variables. In addition, this study has proposed a number of hypotheses to investigate the connections between common issues with visual merchandising and impulsive buying.

Objectives Of The Study

The purpose of this exploratory study is to provide an in-depth, organized understanding of consumers' impulsive buying behavior with reference to Star Bazaar retail chain stores in Pune city and with a special focus on visual merchandising.

The current study's timing is crucial because organized retailing in India is increasing rapidly and a major source of revenue for many players in the retail environment and is at a point where a comprehensive understanding of these markets would encourage additional dominant players to provide organized retailing with better service.
The objectives of the study, which the researcher hopes to achieve through investigation and comprehension, are as follows:

1. To examine how visual merchandising affects customers' impulsive purchases
2. To investigate the effects of appealing product displays, store atmosphere, and daily deals on customers' impulse behavior.

Hypothesis Of The Study

H_1- Attractive product displays influence customers who make impulsive purchases.

H_2: Ambiance in a store can have an impact on impulsive buyers.

H_3- Daily offers have an impact on consumers who make impulsive purchases.

Research Methodology

The descriptive study, which is restricted to Star Bazaar retail chains in Pune City, aims to investigate the impact of visual merchandising on customers' impulsive purchasing decisions. The degree to which certain visual merchandising factors, Attractive productive display, Ambiance inside the store, and Offers for the Day are associated with impulse buying is also determined in this study. The study's intended respondents are regular Pune-based customers of the Star Bazaar department store chain.

Respondents were asked to provide first-hand information through a structured questionnaire. An interview schedule was created so that the respondents could provide information. The factors chosen for the study's objectives were the focus of each section of the questionnaire. The survey's method of sampling was convenience sampling. The researchers have selected a sample size of 520 respondents for the purposes of the study. Respondents were asked to rate the significance of five visual merchandising factors on a Likert scale, with 1 representing strong disagreement and 5 representing strong agreement.

To make sure there are no invalid or missing responses, the information gathered from the respondents was cleaned. Next, tests for construct validity and the KMO and Bartlett's tests, test of communalities, factor analysis, and test of factor structure were run.

Reliability Statistics

Five to seven items were used to measure each variable that was chosen for the purposes of the study. The Cronbach's coefficient (α) was calculated to determine the questionnaire's validity and used to evaluate the responses' reliability and internal consistency. A Cronbach's coefficient of greater than 0.7 is considered sufficient for this kind of study. The reported factors, including the dependent variable, had values of 0.836, 0.816, 0.794, and 0.769 in this study. It suggests that the responses to the questionnaire are highly internal consistent.

Data Analysis

The purpose of the researcher's creation of Table 1 was to display the survey respondents' demographic profile.

Variables	Categories	No of Respondents	Percentage
Gender	Male	332	63.8
	Female	188	36.2

Age	Below 25	48	9.23
	26-35	64	12.30
	36-45	188	36.15
	46-55	160	30.76
	56 and above	60	11.54
Marital Status	Married	396	76.15
	Unmarried	124	23.85
Qualification	Matriculation	40	7.69
	Diploma	8	0.02
	College but not graduate	68	13.07
	Graduation	340	65.38
	Post Graduate	64	12.31
Occupation	Self employed	186	35.76
	Salaried	100	19.2
	Professionals	64	12.3
	Home makers	154	29.6
	Students	16	3.1
Monthly household income	Below 50000	180	34.6
	50000-75000	100	19.2
	75000-100000	100	19.2
	Above 100000	140	26.9

Table 1- Showing The Respondents' Demographics

As can be seen from the information presented above, Table No. 1 displays the demographic profile of the survey respondents; male make up 63.8 percent of the survey participants, while women female up 36.2%.

The researcher can observe that 36.15 percent of respondents are between the ages of 36 and 45, 30.76 percent are between the ages of 46 and 55, 12.30 percent are between the ages of 26 and 35, 11.54 percent are between the ages of 56 and up, and 9.23 percent are under the age of 25.

In the survey, respondents were divided into two groups: married respondents (76.15%) and unmarried respondents (23.85%).

Five strata have been developed to accommodate the complete educational background of the customer respondent. According to the survey, 7.69 percent of respondents have completed their matriculation, 12.31 percent have postgraduate certificates, 13.07 percent have attended college but do not have a degree, and 65.38 percent have degrees.

Based on their occupational patterns, the survey respondents' occupational profiles can be seen in the above Table 1. They were divided into five strata by the researcher. According to the table, 35.76 percent of respondents to the survey are self-employed, followed by 29.6 percent who identify as homemakers, 19.2 percent who identify as salaried, 12.3 percent who identify as professionals, and 3.1 percent who identify as students.

Above Table 1 shows that 34.6% of respondents fall into the monthly household income class of less than Rs.50000, 26.7 percent fall into the annual household income class of more than Rs.10000, and 19.2% fall into the monthly household income class of between Rs. 50,001-Rs.75, 000   and Rs. 75001- Rs. 100,000 in each case.

Hypothesis Testing

The testing of the hypothesis between the independent variable(s) and dependent variable(s) is covered in the following section. The researcher has developed the following hypothesis and used Pearson Correlation analysis to either prove or disprove it.

Hypothesis (I)

H_1- Attractive product displays influence customers who make impulsive purchases.

H_0- There is no statistically significant connection between appealing product presentation and impulsive purchasing behavior of customers.

Hypothesis (Ii)
H$_2$: Ambiance In A Store Can Have An Impact On Impulsive Buyers.

H$_0$-There Is No Correlation At All.

Hypothesis (Iii)
H$_3$- Daily offers have an impact on consumers who make impulsive purchases.

H0- There is no statistically significant correlation between daily offers and impulsive purchasing patterns of customers.

Correlations		Attractive Product Display	Ambiance Inside the Store	Impulse buying	Offers for the day
Attractive Product Display	Pearson Correlation	1	-.401**	.321**	.290**
	Sig. (2-tailed)		.000	.000	.001
	N	520	520	520	520
Ambiance Inside the Store	Pearson Correlation	-.401**	1	-.198*	-.178*
	Sig. (2-tailed)	.000		.028	.048
	N	520	520	520	520
Impulse buying	Pearson Correlation	.321**	-.198*	1	.278**
	Sig. (2-tailed)	.000	.028		.002
	N	520	520	520	520
Offers for the day	Pearson Correlation	.290**	-.178*	.278**	1
	Sig. (2-tailed)	.001	.048	.002	
	N	520	520	520	520
**. Correlation is significant at the 0.01 level (2-tailed).					
*. Correlation is significant at the 0.05 level (2-tailed).					

TABLE-2 SHOWING CORRELATIONS AMONG THE VARIABLES

The significance value (p) of the Pearson correlation is less than .05 (p<.05) for attractive product display, store ambiance, and even daily deals, as can be seen in Table-2 above. This suggests that attractive product displays, store ambiance, and daily specials all have a big impact on impulse buying.

Findings And Conclusion
The purpose of our research was to investigate the relationship between attractive product display, store ambiance, new product arrival, and offers for the day with impulse buying behavior and the impact that visual merchandising has on consumer purchase behavior. Though all the three factors act as independent factors while impacting the impulse buying behavior, It is concluded from the research findings that all these three factors have an impact on the consumer purchase behavior in some form or the other.

This suggests that consumers are most influenced to buy a certain product if they find the display attractive. The ambiance inside the store is also a driving factor to positively influence an individual to buy a product. Offers for the day also influence impulse buying significantly.

Hence, it can firmly conclude that managerial attention should be focused on these five factors to increase impulse purchases. Retailers should make their displays more attractive. This is likely to increase the sales of their product on impulse.

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DETERMINANTS FOR THE FORMATION OF ATTITUDE TOWARDS INTERNET ADVERTISEMENT: A REVIEW OF LITERATURE FOR INDIAN MARKET

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ABSTRACT

Using the internet as a global marketing platform, internet advertising allows promotional messages to be delivered to people around the globe (SendPulse, 2019). According to Halli Bruton, Burdette Ketchum's content and social media account executive, "Internet advertising is a double-edged sword because there are so many places and platforms to advertise that there is no way to ignore it, but at the same time, consumers are being bombarded with advertising all day long, so they need something unique to catch their attention." According to Mi Hyun Lee (2021) there have been reviews of the literature on internet advertisement in the past. The present review attempts to provide a more comprehensive overview of advertisements taking note of the changes in them in recent times. The authors of this paper have reviewed the literature on internet advertising in a way that would enable researchers, academicians, and practitioners to better understand the factors that determine attitudes toward internet advertising. In addition to examining various papers and proposing determinants, the authors have identified certain gaps that could provide a starting point for future research on internet advertisement.

Keywords: Internet Advertisements, Determinants, Literature, SEM

Introduction about Advertising

Advertising is the most significant occurrence where it motivates consumption, monetary undertakings and models standard of living and a certain value orientation. Consumers come across many forms of advertising daily in the form of multiple media and everyone seems to have their own different beliefs about various features of advertisements ranging from delight and appreciation to skepticism and disapproval (Milorad Kilibarda, 2019). Advertising in general can have both the views positive as well as negative i.e. adverse and favorable depending upon the need and taste of the customers as well as how much benefit it is bringing to the economy. Depending upon all these factors advertisements are either successful or not. Bauer and Geyser from Harvard's (Bauer, 1968) assessed different views regarding advertising like the different issues of advertising related to other features of American life, opinions and approaches about advertisement in common, opinions about social and economic role about advertising and reactions to specific print ads; and for this they conducted personal interviews. After conducting the research seven resulting items were clustered into two major clusters of economic and social effect. This study created the major revolution in the advertising world and was referred by many with their primary measurement tool. Researchers used this two-dimensional scale to measure different population groups like executives (Greyser, 1971), Students (Haller, 1974), and subscribers (Anderson, 1978). One common conclusion of these studies was that these studies supported advertisement economic role and criticized the social role. As the study of Bauer and Greyser included only two factors, many other studies were conducted individually which came up with different factors of advertisements or belief systems of advertisement. Studies like (Barksdale, 1972), (Haller, 1974) and (Durand, 1985) suggested advertising as an information source. Materialism was suggested by (Larkin, 1977), falsehood and deception by (Muehling, 1987), ethics in advertisement by (Triff, 1987) and enjoyment of advertisement by (Russell, 1989). But there is a fundamental difference between beliefs and attitude, beliefs are expressive statements about objective characteristics and attitudes are summary assessments of substances, and after the study of Bauer and Greyser were tested by many authors like Fishben and Ajzen considered attitudes to originate from beliefs. And considering all this (Mittal, 1993) came up with personal uses and social effects; In personal use, information is provided about the product, one's social role and image, hedonic pleasure is produced, while in a societal context, problems such as materialism, value corruption, falsity are generated. and all this makes the attitude for advertising and from this study it got clear that beliefs make attitude and attitude makes behavior, and this model came to be known as the seven-factor belief model.

Internet Advertisement

Internet advertisement as a topic when researched and was studied to find its influence on consumer attitudes, results were positive in most of the studies. Ducoffe who initially studied the attitude of customers towards

advertisement in general and whose base is considered for further studies also found a relationship between entertainment, irritation, and information with web advertisement (Ducoffe, 1996). While Schlosser in 1999 when studying to find the relationship between different factors and attitude towards online advertisement also found entertainment and information very positive and 43% of variance in internet advertisement (Schlosser, 1999). Brackett in 2001 in his studies found information; entertainment, credibility, and irritation have positive impact and direct relationship with advertising (Brakett, 2001) and (Korgaonkar, 2002) while completing his study found believable, entertaining, honest, information and enjoyable as the major factors affecting internet advertising. And many others found factors like credibility, entertainment, irritation, and hedonic pleasure to be the significant factors in forming an attitude towards internet advertising (Faraz, 2013) and (Tsang, 2004). Studies done later also found almost the same results showing trust, credibility, information, entertainment, and interaction as the main factors or constructs to predict the attitude of customers towards internet advertising (Dr. Suresh Banu, 2013).

Rodgers and Thorson in 2000 felt the value of customers and hence proposed a model for internet advertising known as interactive-information processing model (IAM). This model includes both customer's-controlled aspects as well as advertiser controlled aspects. The major point that this model covers is that the purpose of using the internet will affect the processing of internet advertisements.
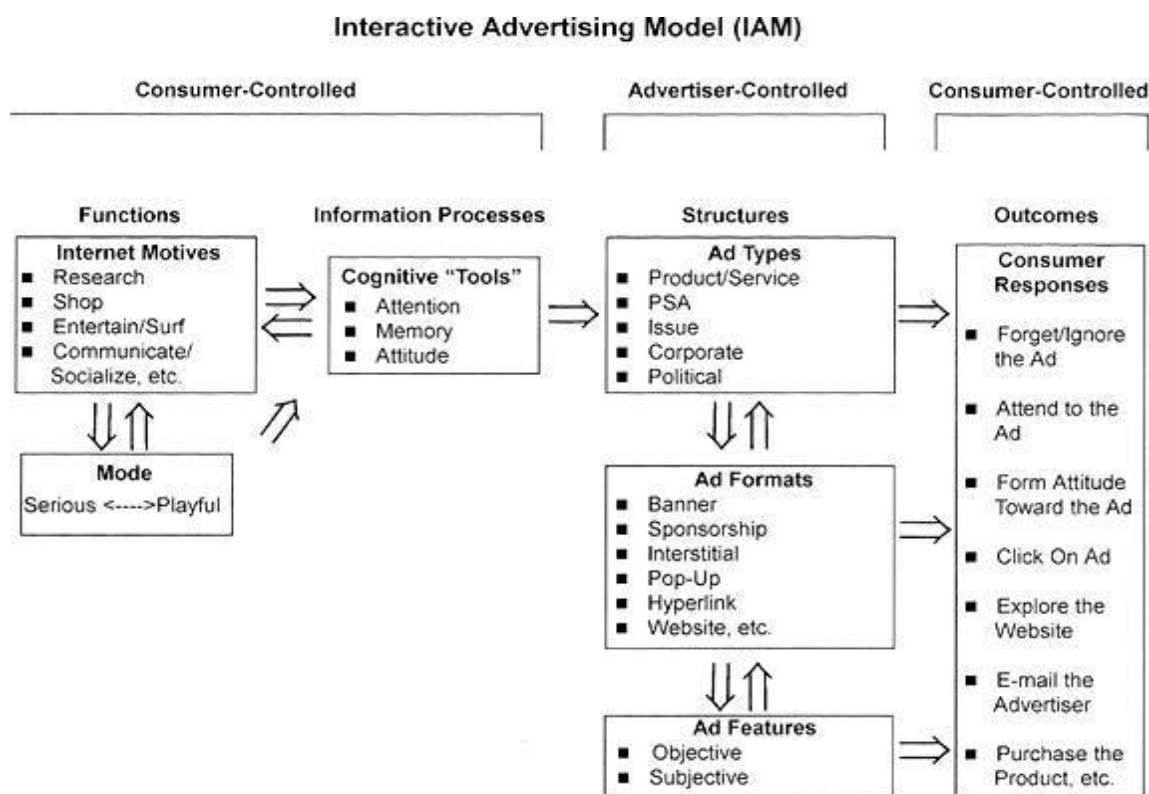
Figure 1: Interactive Advertising Model (Thorson, 2010)

For the present review to be successful, it must be different from the previous reviews, and it must be broader in scope. Apart from providing a review of determinants of internet advertisement literature, this paper covers the following objectives as well:
1.   Organize the publications as per the determinants so that they can be easily and quickly. searched.
2.   Organizing the literature.
3.   Formation of models based on determinants for further research.

Determinants for the formation of Attitude:
The key determinants responsible for formation of attitude of customers towards Internet Advertisement as per the various authors and their literature:

AUTHOR	KEY FACTORS
Korgaonkar, (2002)	Honest, believable, entertaining, enjoyable, and informative.
Lori D. Wolin, (2002)	Product information, hedonic pleasure, social role, good for economy, materialism, falsity, and value corruption.
Xiang, (2008)	Informativeness, entertainment and credibility.
Cheng, (2009)	Entertainment, informative, irritation.
Vander Waldt, (2009)	Entertainment value, informativeness, credibility and irritation.
Wang, (2009)	Entertainment, information, credibility, economy, value corruption.
Brackett, (2010)	Informativeness, entertainment, irritation, and credibility.
Richard, (2010)	Entertainment, Challenge, and Information.
Cardoso, (2011)	Information, Entertainment, Trustworthiness, Irritation
Bassam, (2012)	Information, Entertainment, Social role, Falsity and Value corruption.
Ching, (2013)	Interactivity, vividness, entertainment, and self-referencing.
Faraz, (2013)	Product information, hedonic, social role, and irritation.
Mahmoud, (2013)	Information, irritation, values corruption, and entertainment.
Ogutu Martin, (2014)	Credibility, Informativeness, interactivity, entertainment, and irritation.
Thamaraiselvan Natrajan, (2015)	Social role and image, hedonic pleasure, product information, materialism, value corruption, falsity, demographic variables.
Anabel Gutierreza, (2019)	Product Information, internet privacy concerns, monetary rewards(materialism)
Milorad Kilibarda, (2019)	Security, Information, Shipping, Pricing, and time.

Mi Hyun Lee, (2021)	Informativeness, Education, Contextual Factors, Place of residence.
Martínez-Domínguez, (2022)	Education, Age, Informativeness, Place of residence
Sukumaran, (2022)	Product Information, Rewards, Credibility, Perceived intrusiveness.

Table 1: Key determinants responsible for formation of the attitude of customers towards Internet Advertisement

Product information

Consumers' attitudes toward advertisements are determined by a strong belief antecedent. Information has the efficiency and ability to create positive advertising value where consumer's needs and wants are better matched and advertising value can be created easily (Mi Hyun Lee, 2021). One of the major responsibilities of advertisement is to create awareness about the product and service which is possible only through proper information (Ju-Pak, 1999). And many researchers when conducting their studies found out positive relationship between product information and the attitude of customers towards online advertisement (Ducoffe, 1996), (Wolin, 2002), and (Wang, 2009).

Hedonic/Pleasure

When an advertiser wants to reach the global market, entertainment and pleasure plays the most important role and can be helpful at the same time if used wisely. Web advertising with its mutual, multimedia competence, can be attractive, sentimental, humorous, and entertaining (Watson, 1998). Websites with rich content add value and try making it giving pleasure of watching, customers may be attracted more (Hoffman, 1996). Example: YouTube, Facebook. There is a lot of scope to websites as they can add content wisely and also content can be presented in such a way that it touches the consumers and they are impressed by it and enjoy watching advertisements (Wolin, 2002). Websites like YouTube, Facebook, and Instagram can add many trending concepts of advertisements and can reach their consumers as many studies done earlier have found positive relationships between pleasure and attitude of customers towards advertising (Ducoffe, 1996).

Social role and image

It is the belief that social websites influence forming social status and image through lifestyle. Web advertising can easily promote lifestyle changes and can deliver many social messages through it (Wang, 2009). Advertising that affects consumers' social image through fashion-related advertisements and making them aware about the latest trends in the market is a good example. Web advertisement if done properly with the help of social media sites can bring positive lifestyle changes and the chances of purchase decisions improve (R. W. P. a. B. Mittal, 1993). Social role and image are significant belief constructs that help in creating a positive attitude of customers towards online advertising (Wolin, 2002). Banner advertisement is one of the examples of social media websites which can motivate customers in many ways. Perception of social role and image is a significant belief that helps the customers to create positive response about advertising (Thamaraiselvan Natrajan, 2015) was the result of one study that was carried out in India.

Good for economy

With the help of web advertising, it has become very easy for the consumers all over to choose from a wide variety of merchandise from home, office resulting in saving time, money and effort. Good for the economy indicates that advertising helps consumers to adapt to new goods, technologies and services coming up in the market, provides employment, drops the cost of production, encourages strong competition, and also boosts up the standard of living (Belch, 2008). US online retail sales reached $54 billion in 2001 (Emarketer, 2001) which helped in boosting up the economy's spending sector. When the environment is such that price comparison is very easy, capacity for saving is important, the motivation for the customers to shop on the web is strong (Comer, 2000). One of the aspects of economic motivation is the consumer's capability of receiving free gifts in the form of coupons, cash back or any product (Wolin, 2002). And earlier studies have shown a positive relationship between consumer's attitude and good for the economy (Mittal, 1993).

Materialism

Consumption habits of consumers have no reason and no explanations, consumers can purchase products that they don't need and can't afford just because they have interest in it (Lee, 2021). Materialistic people have unreasonable engrossment towards material things which may not include spiritual or intellectual concerns

(Larsen, 1999). Web users are exposed to many options of material goods which may tempt them to purchase the goods which may not be of direct use of that time, but the discounts or the deals may motivate them to purchase hence resulting in materialism (Hoffman, 1996). Advertising in general can provide customers with unlimited options which can keep them busy for the longest period at the expense of political, cultural and social qualms (Belch, 2008). If advertising is responsible for materialism or the purchase that customers are doing, then it will have a negative attitude (Wolin, 2002).

Falsity/No-sense
Many times websites just to attract more customers will provide information which may be misleading, half true and not up to the mark just to get more walk-ins on their websites; now this may lead to negative attitude of customers towards web advertising (Nadilo, 1998). There are many types of advertising that promise some different and magical type of results from the products which are not delivered once the product is purchased by the customer; websites do this to stay in limelight and to fetch customers (Ross, 1998). Brand or advertisement can have a negative attitude towards themselves if even a single wrong message is interpreted on social media advertisement which in turn can cause irritation and distrust among consumers. Previous studies have already shown a negative relationship between falsity and the attitude of customers (Wolin, 2002) and (Wang, 2009).

Value corruption
Online advertisements or web advertisements can portray and have the power to display whatever content they want and as a result attract customers from all age groups. To gain customers attention marketers in India use emotions, values, culture, religion as a tool to attract them and then try selling them their products and services (Banerjee, 2008). Any form of advertisements which also include web advertisement can have either positive or negative impact on the customer depending upon the type of content advertisement is using. Web advertisements with wrong content such as unpleasant sexual implication, illegal exploitation can cause negative attitude towards customers towards advertisement (Wolin, 2002), (Wang, 2009). These days there are software available which blocks unwanted advertisements on the web page thus making it easier for customers and in a way stopping value corruption which in itself is a crime (McCormally, 2000). Thus, web advertisements have the power to corrupt the values of its own customers; in turn molding their values.

Credibility
Everyday people come in contact with lots of information through television, family, friends, websites, colleagues, books, magazines, newspaper, social media, etc. All of these give some or the other type of information, of which some information might be true some, might not be true. It is in the hands of customers to decide which information to trust and which information according to them is credible. credibility started getting more attention in the late 1990's since the internet started taking over and also providing new information and v=creating an interactive environment for customers allowing them to seek information and communicate in a way which was never possible before. Consequence of this was such that advertisers started taking advantage of this scenario and examined it from different perspectives to gain attention (Rieh, 2007). Advertising credibility as defined by MacKenzie and Lutz is the Believability and truthfulness of advertising as perceived by consumers (MazKenzie, 1989). Actually it is all about what was said about the advertisement and what is done in reality, if the information shared is something else in comparison to the reality then it may create negative attitude of customers towards the ad and vice versa. In simple words if the product claims matches with the performance, the credibility increases (Herbig, 1995).credibility of an advertisement completely depends upon how truthful or believable consumers think the advertisement is. Once studies on credibility started it was found that credibility is the major factor that affects the attitude of customers towards advertising (Brakett, 2001)43. In short, the credibility of an advertising message has the power to influence consumer's attitude towards advertising (Tsang, 2004).

Interactivity
The degree to which an individual can act on and react to i.e., influenced or be influenced to a stimulus is defined as interactivity (Florenthal, 2010). Because of the increased use of internet and digitalization, it has comparatively become easy for customers to interact with the software application that they are using (Gaurau, 2008) .Interactivity establishes two way communication where consumer gets the chance to communicate about their queries or can get aware and most importantly can control whatever they want to view or not. Interactivity is the key component as consumers have the power to view or exit the page that they are watching and this is the special setting in online advertising (Schlosser, 1999). In online advertisements there are many types of ads like bumper ads, overlay ads, etc. Some of which can be skipped, and some cannot, the ones which can be skipped give customers the power to control ads and this is one of the main features of interactivity. Ads which are highly interactive give more power of control and choice to consumers to build their experience in turn resulting in building attitude. The surviving literature proposes that online shopping websites with high

interactivity contributes to increased patronage, such that higher the degree of consumer website interactivity, the higher the level of participation of customers, which in turn influences the loyalty of websites (Campbell, 2008) and (Dann, 2004). When the interactivity is higher it helps the consumers to remember the ad which in turn helps in increasing the consumption of that product or service (Schlosser, 1999). All this high stimulation helps in increasing engagement of customers in the story of the ad and they remember the ad in a pleasurable and active way enabling them to control and participate in the ad and confirming the transportation effect. Hence from all past studies it can be concluded that higher interactivity helps in building a positive attitude of customers towards products.

Vividness
Vividness as defined by Steuer J. refers to breadth and depth of the message where breadth refers to sensory dimensions, senses presented, and cues i.e. graphics, colors, etc., and depth refers to the quality and resolution of the band width (Steuer, 1992). Advertisements which are vivid have the quality of being clear and capture one's mind so that they can remember ads for a longer period. The past studies and the literature suggest that vividness is one of the most noticeable attributes that contributes to consumer's emotional reaction (Mooradian, 2008). Vividness as defined by Steuer includes the senses to engage the consumer for a considerate amount of time. A vivid advertisement will fascinate viewer's vision, will gain their attention, and will emotionally engage them, will help them with their imagination and excite them so that their interest is maintained (Nisbett, 1980). Vividness sometimes is mistaken as interactivity, but it differs on the basis of two ways communication as sometimes advertisements can be highly vivid but non- interactive for example you tube, television and vice versa (Steuer, 1992). All the prior research suggests that there is a positive effect of vivid advertisements on emotional responses of customers (Mooradian, 2008). Vividness also helps in improving the clarity and making customers aware and increases their knowledge about the product, increases their belief; improves their virtual experience as many types like animations, celebrity involvement, etc. can be used for remembrance, and this all results in improving their shopping enjoyment. Persuasion is enhanced if there is richness in context that is used in advertisement and it allows users to have images (Petrova, 2005).

Self-referencing
It is normal human tendency to relate everything with them and then judge, this happens with advertisements as well where viewers will relate it with themselves and judge its usefulness. For example, if the ad is of fairness cream, viewers will relate to it, judge, measure its usefulness as per the information shared and then decide whether to purchase or not. Various studies suggest that those who are high in self-referencing can relate to advertisements on a greater level and form a positive attitude towards advertisement and products and have more encouraging purchase intentions in comparison to the individuals who have low self-referencing quality. And an advertisement which has something extra, any element which is a landmark and viewer can directly relate or like that landmark then it can help in creating a rather positive attitude towards that product or advertisement as it will have greater relevance. Self-referencing ads can be high on context and can use storytelling methodology which will stay with viewers for a longer period of time. They think about their own behavior, relate it with the context used, and imagine themselves as the hero of the story which creates a transportation effect. Narrative advertisements which have great self-referencing quality can have an Attitude of positivity towards advertisement and product or service advertised in it.

Deals/Offers/ Festivals
To attract customers from any part of the globe, price plays the most important role. Considering India where the majority population is middle class and higher middle class price consciousness plays a major role. For products which are everyday commodities, price is an important consideration as opposed to the status items which are bought by upper class or wealthier people. Deals or offers are the part of strategy that any organization will make after a lot of research and a lot of time. Other than price time at which deals and offers should be applied are also important. Time like during which festival and also what time of the month, if offers are good but are advertised at the end of the month chances are most of the people will view the ad but nobody will buy. When any website or portal comes up with discount deals or offers, one of the major reasons is to increase the footfall on their site and other is to reach as many new viewers as possible. And when this happens viewers are mostly from tier 2 or tier 3 cities. Festival offers are considered the best time because considering Indian culture and religion have value in the hearts of people, so if marketers can come up with some attractive offers at that time, an increase in viewers is guaranteed. But a major part of all this success depends on the content of the advertisement that is featured on the portals and is viewed. Major examples of festive sales are Flipkart's billion-day sale and Amazon's great Indian sale both occur simultaneously for five days and face a major faceoff, in the end benefiting the customers and also maintaining the importance of the brands as brand value should not decrease. Based on this literature and study, the following model is suggested for studying customers' attitudes toward internet advertising
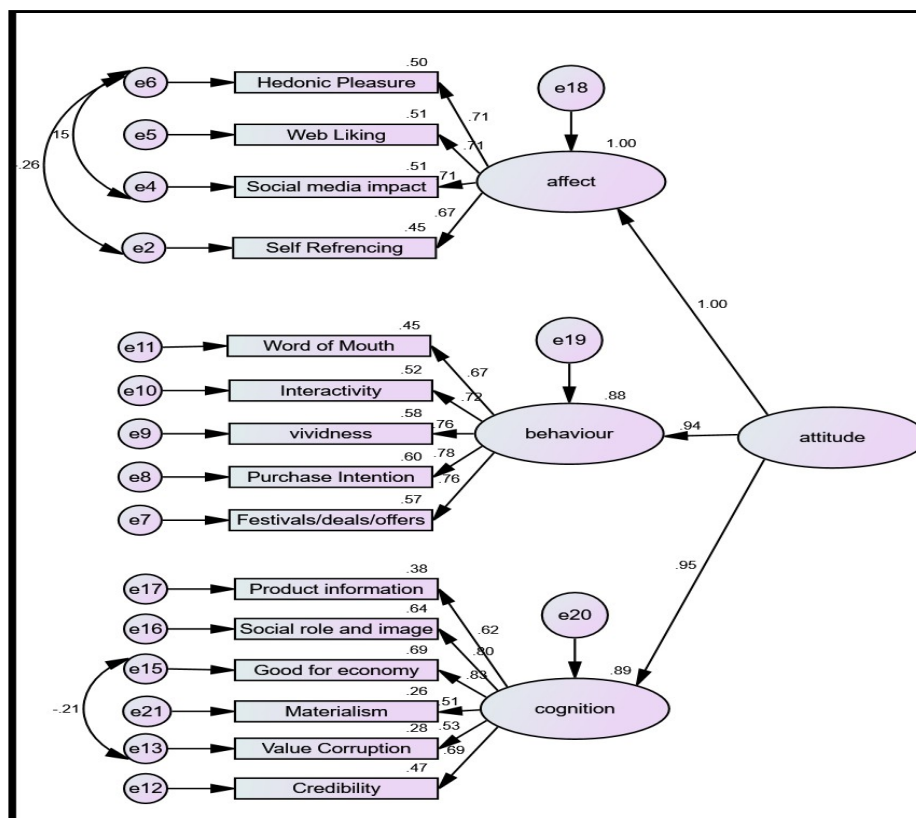
Figure 2: Structural Equation Model (Compiled by researcher)

Model Fit Summary

Assessing Measurement Model Validity, The Table 2 shows the Factor Loadings of various factors. As suggested by Hair. (2009), the recommended value of factor loading should be greater than 0.5. As most of the Factor loadings are greater than 0.5, it confirms construct validity.

Variables	Factors	Factor Loading
Self-referencing		0.672
Social media impact	Affect	0.712
Webliking		0.712
Hedonicpleasure		0.709
Festivals		0.758
Purchase intention		0.777
Vividness	Behavior	0.759
Interactivity		0.718
Word of mouth		0.672
Credibility		0.686
Value corruption		0.531

Good for economy	Cognition	0.829
Social role and image		0.798
Product information		0.615
Materialism		0.514

Table 2: Measurement Model Validity

Model	RMSEA	LO90	HI 90	PCLOSE
Default model	.080	.097	.114	.000

Table 3: Root Mean Square Error of approximation (RMSEA)

To study the goodness-to-fit model root mean square error of approximation (RMSEA) was studied, While Steiger and Lind first proposed this index and the associated conceptual framework in 1980, it has only recently been recognized as one of the most useful criteria for modeling covariance structures. Values less than 0.05 are considered good fits, while values as high as 0.08 represent reasonable approximations within the population, according to Browne & Cudeck (1993). A RMSEA of 0.08 to 0.10 indicates a moderate fit, and a value of greater than 0.10 indicates a poor fit. Maccallum (1996) elaborates and notes that any RMSEA value greater than 0.10 indicates a poor fit. It was suggested that a value of 0.06 would indicate a good fit between the hypothesized model and the observed data by Hu and Bentler (1999). RMSEA was found to be 0.080 in this study, indicating that the model was well fitted. Accordingly, our goodness-of-fit results suggest the model fits the sample data well.

Conclusion:

The usage of the internet is increasing as it becomes more important in people's lives. Therefore, it is strongly encouraged that marketers should advertise more on the internet instead of traditional media. To test the attitude of customers towards internet advertisements and to see which determinants (variables) contribute to the formation of attitude, structural equation modeling was used. A model was formed using the ABC model of attitude; variables were added as indicators for each latent variable. Affect, Behavior and Cognition were added as latent variables. Model was tested and the model fit summary suggests that RMSEA was as per their estimated values. Thus, it can be said that this model is fit to be used.

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DISRUPTORS IN HOSPITALITY INDUSTRY AND ITS IMPACT ON THEIR BUSINESS OPERATIONS

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ABSTRACT

Hospitality industry is one of the largest and fastest-growing industries around the world. In this industry, the basis for success depends on an innovative business model that can offer more than a room with a view. Customers are demanding personalized experiences and hotels are trying to satisfy their needs through technology, customer service, food, design and events. However, the disruption in the industry has changed the way business is being done. Many hotels are trying to keep up with the level of change by investing in new technologies and services, opening up trial shops, setting up mobile apps and integrating innovative payment methods. The current study aims at identifying the disruptors in the hospitality industry and its impact on their business operations. To arrive at this aim, the study has conducted a survey by sending a questionnaire to hotels in the Pune City, Maharashtra, India. The survey data was collected from 93 respondents, and it was analysed using the frequency count method to reveal the impact of disruptors on hotel operations.
Keywords: Hospitality, Technology, Disrupt era, Personalized experience

Introduction

Hospitality industry is one of the dynamic industries around the world. There have been many disruptions which have changed the way the industry operates. Many hotels are trying to keep up with the level of change by investing in new technologies and services, opening trial shops, setting up mobile apps and integrating innovative payment methods. As technology developments unfold at such relentless speeds – hotels and other hospitality setups have to keep up with the revolution. Accordingly, managers and directors should keep a tab on and track the below trends, which are not only the fundamental techniques to curb disruption in hospitality but have also brought forth a revolution.

Following are some examples of disruption:
Cloud or Software as a Service, or SaaS, is a popular topic in the hospitality industry when it comes to technology today. The same is being used quickly by hoteliers to automate repetitive tasks like hotel channel management and distribution. The Hunley Hotel & Golf Club is a good example of this. It moved its entire HMS (hotel management system) to the cloud to save money on IT and administrative costs. Also, it makes it easier to get regular updates within the app.

Mobility: Tablets and smartphones are the new way to use computers, and they have changed the way people check into hotels all over the world. For example, City Nites, a company that rents out serviced apartments, uses Apple iPads to connect to its hotel management system and get rid of old-fashioned, manual registration desk processes. This is a step toward making things more personal and lowering costs related to the front desk.

A personal touch: Sometimes, hotel guests expect their stay to be tailored to them. A hotel can do the same thing by using things like welcome messages, customised food menus, and extra services. This could lead to a lot of useful information about customer preferences that can be put into the hotel's PMS (property management system).

Social media has a big impact on the hotel and restaurant business. We all know that TripAdvisor has become an important place for travellers all over the world to get information. Other social platforms, like Facebook and Twitter, also have a big impact on how guests act. Hospitality Net says that social media is taking over the industry because there are more than 200 million reviews and opinions on TripAdvisor and more than 800 million active users who post updates and share photos on Facebook. From the point of view of managing a hotel's reputation, Best Hospitality Degrees says that these high-end customers have been known to take their complaints to the hotel's Twitter followers after trying other ways to get their problems fixed. This shows that disruption also comes with a lot of hope, which means that the travel and hospitality industries are about to go through a big change in the near future. This is a new way of thinking about the whole customer lifecycle, from making a reservation to leaving a hotel. So, instead of being disrupted by digital technology, hotels need to become digital disruptors themselves by giving their guests a unified experience.

The Internet of Things (IoT) and smartphones, which we've already talked about, have made it easier for customers to plan, book, and control travel from far away. This led to the demise of traditional travel agents, as shown by Thomas Cook's $243 million loss in the first quarter of 2012. On the other hand, Airbnb closed a $475 million funding round at a reported valuation of $10 billion last year. However, less than a year later, the leader in the sharing economy was worth more than double, or $25.5 billion. In 2013, Priceline paid $1.8 billion for meta-search company Kayak. In 2014, SAP paid over $8 billion for Concur, a company that makes software for managing business travel and expenses.

The current study aims at identifying the disruptors in the hospitality industry and its impact on their business operations. To arrive at this aim, the study has conducted a questionnaire to hotels in Pune City.

Review of Literature

Disruptive technologies are the key to innovation and growth in the hospitality sector. Any technology that can minimize costs and maximize revenues is a potential disruptor. These are the elements that can impact how hotels are run and deliver their services from sourcing for customers to check-in, room service, cleaning, laundry and even how much revenue it could generate from sale of restaurant menus or any other aspect.

According to Shankar (2020), traditional hospitality service may well be heading for disruption by new business models based on social media platforms such as Twitter, Facebook, YouTube etc., which will completely change the nature of customer service rendered by hotels. Shankar, in a paper presented at the International Journal of Business Research and Management, emphasizes that hoteliers may soon have to hire social media professionals to facilitate guest services. Under this scenario, guests could interact with their friends on social media platforms such as Facebook or Twitter to book hotels and traditional resort activities. This will also help hotel operators better understand their customers.

According to Juniper Investment Group (2019), disruptive technology is indeed a threat for the hospitality sector. The report clearly states that the travel industry is an easy target for disruption because of its large numbers. The travel market is expected to double from 2.2 billion trips in 2013 to 4.4 billion trips in 2020.

Disruptive technologies are causing sweeping changes in the travel industry by forcing hoteliers to rethink their business model and operations processes.

Jain (2019) mentions that private jet operators can enter a contract with hotels and get discounted rate for tickets when their customers book rooms there, thereby helping them drive incremental traffic and revenue, while enhancing customer experience all at once. According to the author, hospitality service providers can also offer private jet operators with a storefront in their websites to help drive incremental traffic.

According to Hotelmile (2019) disruptive technologies of the hotel industry include artificial intelligence, cloud computing, wearables, Internet of Things (IoT) and mobile apps. All these have had a widespread impact on multiple aspects of business processes and operations – from supplies and demand management to revenue management and marketing. More recently, blockchain technology has emerged as a disruptive technology that can be used across several processes in hospitality operations. The report also states that while some customers prefer to get everything, they need done in one place (for example, booking a package that includes accommodation, tickets, and transport both within India and abroad), others may want to search across different hotels (or even cities) for the right deal.

This can be a problem for service providers as their ability to serve customers has been restricted by their operating costs.

Kalbag (2022) explains that AI-powered technology has the potential to disrupt the eCommerce industry. The report states that AI can lead to significant customer loyalty and reduce customer acquisition costs. According to Kalbag, it will be possible for eCommerce companies to offer their customers personalized recommendations that represent real-time value for them. He also talks about how AI can allow companies to offer a more personalized service by talking about events (such as special promotions) based on a customer's interests. This is something that has historically been difficult for companies as most data about customers was managed manually.

The hospitality sector is approaching a point where it needs to catch up with the disruptions that are already happening in other industries (Nizam,2022). It is believed that AI can be used in many ways in hospitality. From managing guest reservation and payment to delivering a more personalized service, there are many applications

of this technology. The report also states that AI can lead to significant customer loyalty and reduce customer acquisition costs. According to Nizam, it will be possible for eCommerce companies to offer their customers personalized recommendations that represent real-time value for them. He also talks about how AI can allow companies to offer a more personalized service by talking about events (such as special promotions) based on a customer's interests. This is something that has historically been difficult for companies as most data about customers was managed manually.

Companies are looking to take advantage of disruptive technologies by using them to improve their business operations. These technologies will have a substantial impact on the hospitality sector in the future and thus, hoteliers must be prepared to embrace it during the next five years (Ankit, 2022). He believes that artificial intelligence-based innovations are already altering the way hotels interact with guests. This is changing their entire business model.

AI can add value to the hotel industry by allowing it to use data more strategically and allowing it to provide better service for its customers. This will in turn help improve the user experience, which will increase the likelihood of repeat business. According to Ankit (2022), AI technologies can also be used in risk management processes. This will ensure that all aspects of the business are under control.

Demand management systems have transformed the hospitality market because they allow hoteliers and other high-demand service providers to meet a growing demand for accommodations with many more customers now choosing these services over others, says Agarwal (2022). It is believed that AI can enable hoteliers to present a more personalized service. AI has the potential to improve the user experience and it can also help hotels to remove complexity from their operations and make them more efficient.

Such technologies will have a significant impact on the hospitality industry especially in today's highly competitive market where there are plenty of competitors offering attractive deals (Vijayan, 2022). It is believed that AI will provide insight for hoteliers about what their customers prefer; it will also help them to offer relevant information about their property at all times.

Many hotel owners don't have access to the right data and most of them also don't have any experience in how to use AI (Kumar & Ravi, 2022). The research must make sure they are open to learning new things so that they can take advantage of technologies such as AI and the cloud.

Rajan (2021) believes that AI will be used in predictive maintenance and analytics. He explains that it will not just help predict breakdowns and take preventive actions, but it can also help to monitor the health of assets. The real-time data analytics would enable hotels to predict the performance of their assets and give them recommendations on how they can improve the overall quality of operations in terms of maintenance.

AI technology has already transformed the hospitality industry in many ways (Rajput, 2022). But it is still just a disruptive technology; there are many applications which have yet to be discovered.

Overall, there is less research on the hospitality industry and its impact in terms of technology, customer service, food, and design. Several researchers have focussed on the hospitality as a whole and some research studies have investigated the customer perception of hotels. However, there is a need to study the impact of disruption in the hospitality industry and its effect on businesses operations. The impact of disruptors on hotel operations has not been much studied in India. The purpose of this study is to identify the disruptors used by hotels in Pune City, Maharashtra and its overall impact on hotels business operations.

Objectives of the study
1. To find out the level of disruption in the hospitality industry.
2. To study the impact of disruptors on business operations.

Hypothesis
H1: There is a high level of disruption in the industry.
H2: There is a severe impact of disruptors on business operations in the hospitality industry.

Methodology
Following methodology was designed for the study to collect primary data.
a.   Identify a sample of 93 hotel managers from Pune City, using convenience sampling. The hotels which were chosen for the same purpose included hotels that are 3 star, 4 star and 5 star hotels in Pune City.

b. Design and validate a (minimum 10-point) questionnaire for ascertainment of level of disruption.
c. Seek responses on a 5-point agree-disagree scale.
d. Conduct the survey.
e. Summarize the responses.
f. Analyze the results.

The study was conducted across Pune City.
Scheme formed for testing of hypotheses

a. Responses were collected under 2 sections:
First section of the questionnaire was dedicated to the profile information of the managers
Second section: level of disruption and impact of the disruptions on the business operations of the hotel.
b. For each of the sections an average was calculated.
c. Percentages to questions under a particular section of the questionnaire were averaged to get a single score for that section,
d. P-values were calculated, and the null hypotheses was checked for rejection or non-rejection.

Data Analysis

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	18-30 years	2	2.2	2.2	2.2
	31-40 years	9	9.7	9.7	11.8
	41-50 years	48	51.6	51.6	63.4
	51-60 years	34	36.6	36.6	100.0
	Total	93	100.0	100.0	

Table no 1. Age of respondents.

From the above table can be seen that 51.6% of the respondents were belonging to the age group of 41 to 50 years. 36.6% of the respondents belonged to the age group of 51 to 60 years. 9.7% of the respondents were belonging to the age group of 31 to 40 years whereas only 2.2% of the respondents were belonging to the age of 18 to 30 years.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	86	92.5	92.5	92.5
	Female	7	7.5	7.5	100.0
	Total	93	100.0	100.0	

Table no 2. Gender of respondents.

92.5% of the respondents were male and only 7.5% of the respondents were female. The table shows that there is domination of male members as far as the hotel managers are concerned.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0-5 years	6	6.5	6.5	6.5
	6-10 years	18	19.4	19.4	25.8
	11-15 years	58	62.4	62.4	88.2
	16-20 years	8	8.6	8.6	96.8
	Above 20 years.	3	3.2	3.2	100.0
	Total	93	100.0	100.0	

Table no 3. Years of experience.

The above table shows that 62.4% of the respondents had an experience of 11 to 15 years. 19.4% of respondents had an experience of 6 to 10 years and 8.6% of the respondents had experience of 16 to 20 years. This shows that the study has considered the respondents belonging to different levels of experience. This adds to the overall reliability of the study.

	Not Disruptive at all.		Less Disruptive		Averagely Disruptive		Fairly Disruptive		Most Disruptive	
	Count	Row N %	Count	Row N %	Count	Row N %	Count	Row N %	Count	Row N %
Mobile Apps	2	2.2%	1	1.1%	10	10.8%	41	44.1%	39	41.9%
Automation Technology	20	21.5%	9	9.7%	2	2.2%	31	33.3%	31	33.3%
Internet of Things (IoT)	10	10.8%	24	25.8%	30	32.3%	21	22.6%	8	8.6%
Technology Firms	16	17.2%	39	41.9%	28	30.1%	7	7.5%	3	3.2%
Drones	0	0.0%	30	32.3%	53	57.0%	6	6.5%	4	4.3%
Artificial Intelligence (AI)	9	9.7%	7	7.5%	20	21.5%	40	43.0%	17	18.3%
VR (Virtual Reality)	3	3.2%	25	26.9%	51	54.8%	7	7.5%	7	7.5%
Cloud Computing	0	0.0%	30	32.3%	54	58.1%	3	3.2%	6	6.5%
Digital Signage	6	6.5%	6	6.5%	34	36.6%	33	35.5%	14	15.1%

Table no 4. Disruptive technologies.

From the above table it can be seen that 44.1% of the respondents stated that mobile apps were fairly disruptive whereas 41.9% of the respondents stated that mobile apps were most disruptive. This is because of the growing penetration of cell phones among customers of all age groups and ethnicities.

	N	Mean	Std. Deviation	Std. Error Mean
Mobile Apps	93	4.2258	.84864	.08800
Automation Technology	93	3.4731	1.55753	.16151
Internet of Things (IoT)	93	2.9247	1.12517	.11667
Technology Firms	93	2.3763	.96587	.10016
Drones	93	2.8280	.73164	.07587
Artificial Intelligence (AI)	93	3.5269	1.16648	.12096
VR (Virtual Reality)	93	2.8925	.87802	.09105
Cloud Computing	93	2.8387	.77024	.07987
Digital Signage	93	3.4624	1.03797	.10763

Table no 5. One-sample statistics.

The above table shows that the Mobile apps have the highest mean. These averages were calculated through Likert scales of five where one was for not disruptive at all, two was for less disruptive, three was for averagely disruptive, four was for fairly disruptive and five was for most disruptive. One Sample t-test was conducted with a test value of three (3 was for average disruptive) a mean value of three indicated that a particular technology or element was averagely disruptive.

	Test Value = 3					
					95% Confidence Interval of the Difference	
	t	df	Sig. (2-tailed)	Mean Difference	Lower	Upper
Mobile Apps	13.930	92	.000	1.22581	1.0510	1.4006
Automation Technology	2.929	92	.004	.47312	.1523	.7939
Internet of Things (IoT)	-.645	92	.520	-.07527	-.3070	.1565
Technology Firms	-6.227	92	.000	-.62366	-.8226	-.4247
Drones	-2.268	92	.026	-.17204	-.3227	-.0214
Artificial Intelligence (AI)	4.356	92	.000	.52688	.2866	.7671
VR (Virtual Reality)	-1.181	92	.241	-.10753	-.2884	.0733
Cloud Computing	-2.019	92	.046	-.16129	-.3199	-.0027
Digital Signage	4.296	92	.000	.46237	.2486	.6761

Table no 6. One-sample test.

In the case of mobile apps, automation technology, artificial intelligence and digital signage the mean differences are positive. This shows that these technologies cause major disruptions and can have an impact on the way the organisation does its operations. The first hypothesis that says "There is a high level of disruption in the industry" is accepted.

	No Change at all		Less Changes		Average Changes		Fair Changes		Maximum Changes	
	Count	Row N %	Count	Row N %	Count	Row N %	Count	Row N %	Count	Row N %
Bookings	0	0.0%	23	24.7%	38	40.9%	19	20.4%	13	14.0%
Housekeeping	9	9.7%	11	11.8%	43	46.2%	20	21.5%	10	10.8%
Front Desk Services	3	3.2%	28	30.1%	52	55.9%	4	4.3%	6	6.5%
Maintenance	0	0.0%	23	24.7%	39	41.9%	18	19.4%	13	14.0%
Accounting	9	9.7%	11	11.8%	44	47.3%	20	21.5%	9	9.7%
Marketing & Sales	3	3.2%	28	30.1%	55	59.1%	4	4.3%	3	3.2%
Kitchen Staff	0	0.0%	17	18.3%	49	52.7%	20	21.5%	7	7.5%

Table no 7. Impact of disruptive technologies on different functions.

20.4% of the respondents stated that due to the disruptive technologies, there were fair changes the way bookings were made or acquired. 14% of the respondents stated that there are maximum changes in the way bookings happen due to the disruptive technologies. 21.5% of the respondents stated that the disruptions resulted into fair changes in the way accounting was done. Overall, bookings, housekeeping, front desk services, maintenance, accounting, marketing and sales and kitchen staff all have been affected to a great extent due to the disruptions in technology.

	N	Mean	Std. Deviation	Std. Error Mean
Bookings	93	3.2366	.98243	.10187
Housekeeping	93	3.1183	1.07187	.11115
Front Desk Services	93	2.8065	.83741	.08684
Maintenance	93	3.2258	.97945	.10156
Accounting	93	3.0968	1.05361	.10925
Marketing & Sales	93	2.7419	.73578	.07630
Kitchen Staff	93	3.1828	.82021	.08505

Table no 8.one-sample statistics.

The above table shows that in most of the cases the mean is about 3.0 which indicates that there are more than average changes that have taken place due to the implementation of disruptive technologies. A one Sample t-test was used with a test value of three which was for average changes. Following were the results of the one Sample t-test.

	Test Value = 3				95% Confidence Interval of the Difference	
	t	df	Sig. (2-tailed)	Mean Difference	Lower	Upper
Bookings	2.322	92	.022	.23656	.0342	.4389
Housekeeping	1.064	92	.290	.11828	-.1025	.3390
Front Desk Services	-2.229	92	.028	-.19355	-.3660	-.0211
Maintenance	2.223	92	.029	.22581	.0241	.4275
Accounting	.886	92	.378	.09677	-.1202	.3138
Marketing & Sales	-3.382	92	.001	-.25806	-.4096	-.1065
Kitchen Staff	2.149	92	.034	.18280	.0139	.3517

Table no 9. One-sample test

In 5 out of 7 cases, it can be seen that the mean differences are positive which shows that above average changes were required to be made in the various operations due to the numerous disruptions that happened in the industry. With this we also accept a second hypothesis which states that "there is a severe impact of disruptors on business operations in the hospitality industry."

Conclusions

Following are the major disruptors in the hospitality industry:

1. Mobile Apps- mobile apps are playing a vital role in the hospitality industry. Customers today look for information and booking tickets on their mobile phones and apps provide the solution.

2. Automation technologies facilitate self-service at hotels, giving customers the freedom to order items without waiting to speak to an attendant.

3. Internet of Things (IoT)- this is a revolutionary technology that allows multiple devices and sensors to share data via networks or Internet, allowing them to connect resources through sensors/ appliances/resources which can be automated as well as monitor for changes.

4. Technology Firms- technology firms provide clients a variety of products that offer a personal service to clients.

5. Technology Disruptors- disruption makes way for new technologies and services in the market. These disruptors make the business run smoothly and provide room for competitive advantage for other organizations.

Following are some of these disruptors in hospitality industry:
1. Drones (Helicopters)- Drones are used by hotels to survey the terrain, allowing them to open new areas such as mountaintop, sea and even space travel

2. Artificial Intelligence (AI)- AI is used by hotels to help manage their business operations, understand customers' needs and make improvements to their services

3. Robots- Robots are used to take care of human tasks, hence taking care of all kinds of tasks like cleaning rooms, vacuuming and so on.

4. VR (Virtual Reality)- provides guests an immersive experience and enables them to create a personal memory or even become part of the story that the hotel is recounting. This helps make the customers feel as if they have travelled to the place in real life.

5. Cloud Computing- cloud computing allows users to store data, play games and even run applications remotely. It makes information available anytime, anywhere and on any device with internet access.

6. Digital Signage- it displays information, services, and marketing tools on digital devices in public areas such as airports, malls and hotels. This also provides personalized information based on previously stored data.

Based on the survey conducted in the hospitality industry, it can be concluded that disruptors are taking over existing business models and introducing new technologies in the industry. The efficiency of hotels is increasing at a faster pace with the introduction of these technologies thus making it a more profitable venture.
Recommendations

It is essential for the hospitality industry to utilize these disruptions to their advantage. These disruptors are changing the way hotels run their business and therefore, they need to adapt to these changes and make innovations accordingly.

Hotels and resorts also need to adapt to these disruptive changes:
1. Incorporate new technologies into the business models of hotels, resorts and hospitals for better customer service and efficiency.

2. Formulate a plan for customer segmentation to ensure that each customer gets the right experience according to their needs or expectations.

3. Use data to make improvements according to the trends and predict future demand in the market, thus ensuring profitability and stability of business operations in the hospitality industry.

4. Formulate a master plan that will show how you can cater more efficiently to all your customers' needs through technological innovations.

It is essential for the hospitality industry to effectively differentiate themselves from their competitors to draw more customers. In this regard, the study concludes that the use of disruptive technologies will help serve customer needs thus providing a competitive advantage for these organizations.

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EVALUATING PRE AND POST COVID 19 ORGANIC FOOD INDUSTRY: A CONCEPTUAL FRAMEWORK OF CONSUMERS PERCEPTION IN INDIA

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ABSTRACT
The Covid 19 pandemic situation made it clear that we need a strong immunity to survive such hazardous situations. Thus, there is a need for the consumers to think of a healthier alternative to conventional farming. This paper studies and explores the organic food products shifting demand pre and post covid 19 in Indian context.

This paper reviews previous manuscripts, formal reports, books related to the organic food industry. The reviewed studies in this paper are mostly from India. The paper outlines a conceptual framework for pre and post COVID buying behaviour of organic foods. The data is mostly collected from several Indian Government websites and international organizations such as Agricultural and Processed Food Products Export Development Authority (APEDA), International Federation of Organic Agriculture Movements. Exploratory research was undertaken after analysing various research studies, journals, and governmental websites. The factors are classified into 2 categories based on time (pre and post covid) and area under certified organic process status.

The results show that there has been a tremendous rise in the area/ region under the certified organic process post covid. It is found that post COVID, eco labels or organic certifications is the most important aspect for buying organic food as it adds the trust factor followed by awareness, knowledge, environmental impact and health concerns and price.

Organic food production is the best proposal for all stakeholders - environment, farmers, and consumers. Concern for health and environmental awareness are identified as most impactful influences on respondents' intentions to buy organic foods. Thus,

Eco labelling along with organic certification and eco-friendly claims improves customer trust that may have a favourable influence towards buyers' approach for the purchase of organic products.

The research paper is distinctive by examining the secondary data available from the authentic government websites. With the help of the findings of this research paper, marketing mix strategies can be adopted by the Marketing consultants and/or organic food producers by considering the factors that impact the customers buying decisions towards organic food in India

Keywords – Organic food, Consumers buying behaviour, pre and post Covid 19, Organic food certification

Introduction & Conceptual Background
The ways of agriculture by farmers were almost natural and organic when there was less population in India. This kind of farming, when passed from one generation of farmers to another, could not satiate the needs of the rapidly growing population (Abdelgawwad & Mohamed, 2013)

To fulfil this growing demand of food due to the rising population of India, the farmers widely adopted the scientific interventions in the process of agriculture during the period of Green revolution (Dholakia & Shukul, 2012). This revolution boosted the food grain production but unfortunately along with the rise of produce it also gave rise to high usage of synthetic pesticides and fertilizers causing adverse effects to the environment and human wellbeing. Today, consumers are ever more aware about organic and inorganic products, resulting in more conscious decisions towards buying organic products. This is because during COVID 19 pandemic conditions were more threatening towards the health and well-being of people and thus, today's consumers are more inclined towards Organic foods.

Thus, Covid 19 Pandemic forced the consumers to take interest in more naturally produced foods and their inclination for buying organic foods gave rise to corporate interest in organic and green marketing with

advancement in marketing strategies. Such emerging marketing trends made customers seek full knowledge regarding these foods before buying them. (Manaloor, 2016)

Organic foods
The produce which are cultivated naturally using eco-friendly manure with a great social and environmental responsibility without harming the quality of the soil by preserving its regenerative capacity. This system of soil management delivers nourishing food which when consumed provides resilience towards the diseases. (Singh & Verma, 2017)

Due to the agricultural climatic conditions in India, the soil here has a lot of potential to grow numerous organic products which is extremely beneficial to human wellbeing.
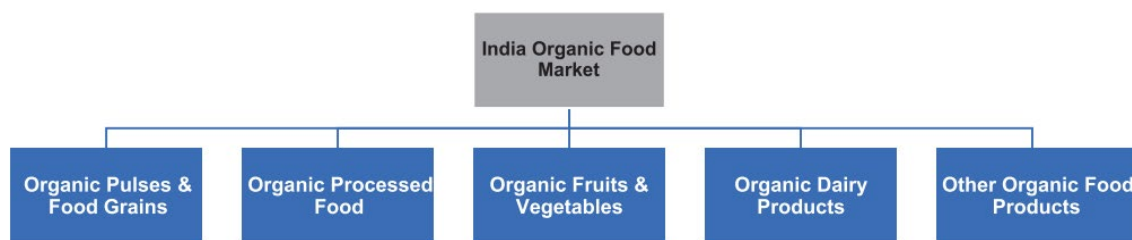
Figure – 1 the Indian Organic food market has a huge variety of produce such as Organic pulses and food grains, processed food, organic vegetables and fruits, dairy products etc.

Launched in 2001, National Programme for Organic Production (NPOP) is the first such enterprise by the Indian Government for the value declaration under the Ministry of Commerce and Industry.
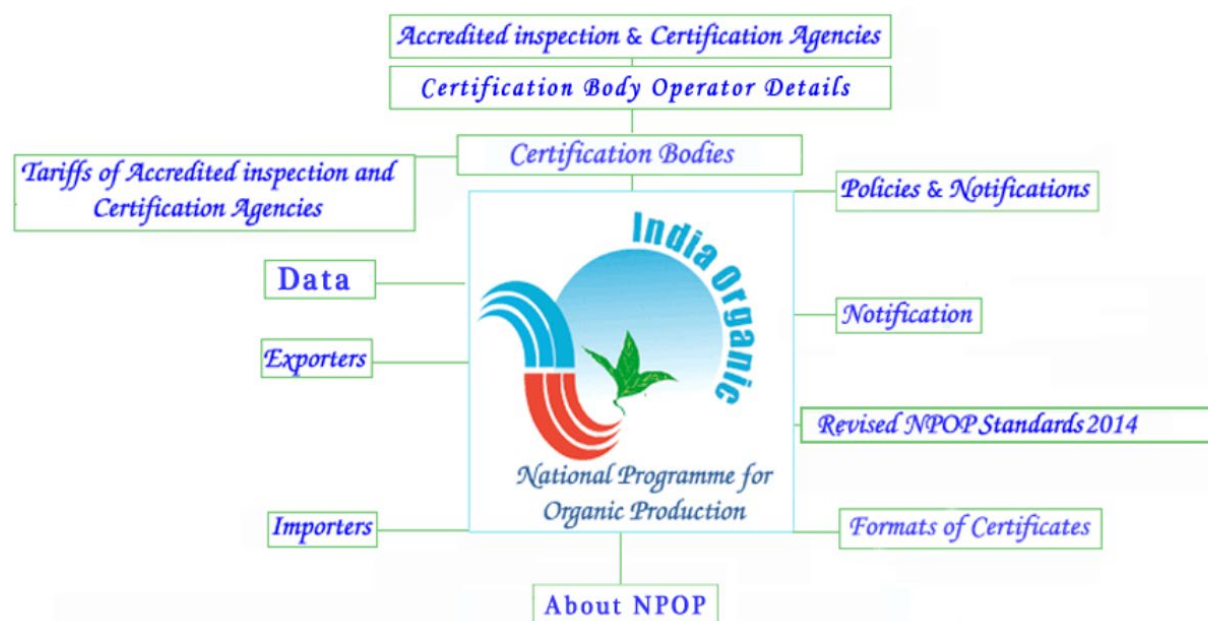
Figure – 2 This National program encompasses the authorisation of certification organizations, set guidelines for organic production, marketing and promotion of organic farming etc. This NPOP scheme for production and accreditation was carried out in India.

Literature Review
"COVID-19," a contagious infection, also called Coronavirus found in Wuhan, China at the end of 2019 transformed into one of the biggest challenges in the history of mankind around the globe in March 2020. This resulted in one of the biggest global economic strikes that evaluated reduction in various industries in the world but brought in enormous growth prospects in the organic food industry from 25% to 100% in 2020. Due to more

chances of the survival of healthy individuals, people recognized immunity as their only solution for coronavirus (Agriculture Market Research Reports, n.d.). Thus, to meet the expectations of the customers who are more than ever aware about the products they are consuming, has forced the organic market players to innovate ways that shall convince the buyers to purchase the organic food products.

In India, the online retailers witnessed 100% growth in their sales. (Chaturvedi, Anamika; Rashid, Chand, Rahman &Mujibur (2021)

During and post pandemic it was noted all over in India, majority of the organic food companies like NCR Indiaorganic.com, North Indian retail chain modern bazaar, pure & eco India, Rajasthan Natural and organic, Gujarat Saurian organic experienced rise in their demand around 25 to 30%. As the population now understands the value of nutritive food, this led the Indian market to motivate the consumer to improve their food choices from inorganic to organic food. The data generated after COVID-19 concerning the Indian organic food market by ASSOCHAM shows an increase from 40, 000 million to 10,0000–1,20,000 million in 2020-2021 (ASSOCHAM, Knowledge Architect of India, 2023).

The products which have the ability to maintain, preserve, protect and promote the originality and sustainability of the natural resources such as air, water and soil are typically called environment friendly, ecological products or sustainable products ("The New Rules of Green Marketing. Strategies, Tools, and Inspiration for Sustainable Branding," 2012). Whereas the products that can be reused or that which utilises little contaminated materials such as plastic and pesticides but do not have a great impact on harming the environment and the social wellbeing of human are the other elements of organic products (Chen and Chai, 2010).

A lot of environmental problems can be resolved using green products. In the recent trend of civilisation, particularly in a developing economy like India which includes changing lifestyles notably an increasing number of affluent people, it has become utmost critical to nurture and consciously practice environmentally responsible consumption behaviours such as buying organic food to reduce the direct and indirect impact of individual consumption decision on environmental degradation. This would result in better and more informed decisions not only for restoring the environment but also for maintaining wellbeing in Human health (Sulaiman and Djerman, 2017). Kumar. (2021) says that the harmful environment instigated by toxic substances that are utilised in our day-to-day life especially in what we consume has increased the consciousness of today's consumers. Thus, the companies are taking extremely informed decisions about their packaging, use of fertilizers, techniques for disposing their wastes etc. Such an accountable attitude towards the environment by all the stakeholders shall result in prolonged benefits for everyone around the planet. Similarly, according to Kim and Seock (2019), this thoughtfulness has changed the vision of many businesses, leading to increased ecological habits and training in today's modern times.

To influence the customers to purchase organic food is the initial stage for establishing the demand in the Organic food market. The customer's approach crucially influences the customer's intentions to buy the green products consistently. This intent towards buying green products strongly predicts the green purchasing behaviour which implies a positive influence of a customer towards buying organic produce.

The growth of the Indian organic food market is extremely evident from the data observed from the official government websites. The rising number of health-conscious consumers is the prime element driving the demand of the Indian Organic food market as the Indian consumers have begun to pay more attention towards the nutrient content and the quality of the food they consume, thereby resulting in flourishing demand in the Indian market. Additionally, other attributes such as robust commercial development, expansion, and growing revenue the customers expenses on physical condition and fitness products and services have grown drastically. The concrete support from the government of India has also catalysed the growth in the Indian Organic food market. By offering financial aids such as National Food Security Mission (NFSM), National Mission for Sustainable Agriculture (NMSA), Rashtriya Krishi Vikas Yojana (RKVY) etc. to the Indian farmers who wants to adopt organic farming; The Government of India is firmly supporting the Organic food industry.

As per the recent research report by IMARC Group, titled "India Organic Food Market: Industry Trends, Share, Size, Growth, Opportunity and Forecast 2022-2027," the organic food market of India is likely to demonstrate a CAGR of 25.25% in the time period of 2022-2027. These items are mostly manufactured with non-practice growth hormones, synthetic pesticides, insecticides, preservatives, and genetically modified organisms (GMOs). This practice gives chemical-free and fresh produce to the consumers and also promotes reduced pollution, enhanced soil potency, and lessening the soil wearing down. Such traditional ways utilize recycled resources that

additionally aids in promoting biological stability. (https://www.imarcgroup.com/smart-agriculture-market, 2023)

Methodology

The study collects data pertinent to the Organic food market through the authorized secondary sources. To enhance the study of this paper a lot of official databases like Web of science, Research gate, Science direct etc. were explored with the help of predefined keywords like Consumption of organic food, consumer buying behaviour towards organic food, organic farming etc. published tentatively from past 10 years i.e 2011-2022. The data is also sourced from Indian Government ministries websites along with few International Organisation to elevate the research quality of the paper. Jaivik Bharat, Agricultural and Processed Food Products Export Development Authority (APEDA) , FSSAI, International Federation of Organic Agriculture Movements to name a few.

The published work from the last decade (2011-2022) that included papers, manuscripts, government reports and authentic internet articles that have good enough potential were classified and incorporated in this research paper. In recent years there has been a lot of growth in the awareness and popularity Organic food market; the internet technology plays a major role in facilitating information about the changing consumer preferences.

With the use of the title of the paper, abstract of the paper, scope and limitations were observed and only the relevant studies were carefully examined and analysed for this research paper.

Additionally, few findings were manually added after a clear understanding of the sources established from the collected information from potential manuscripts, research articles and various official websites.

Objectives of the study

1. To evaluate the pre and post Covid 19 buying behaviour of the consumers towards Organic foods in India.

2. The factors that affect the buying intentions of the consumers towards organic foods in India.

3. To recommend future guidelines for the benefit of all the stakeholders in the organic food industry.

Conceptual Framework & Discussions

Factors influencing consumer purchase behaviour before the Covid 19 can be classified into four categories: Socio -demographics, level of awareness, Health concern and Environmental concern. The impact of socio-demographic, level of awareness, and health concern was found to be more pronounced compared to environmental factors while the price sensitivity was always an obstacle for the purchase intention. These many components help us to come up with a pre Covid conceptual model (Figure 3) (Basha., 2015).
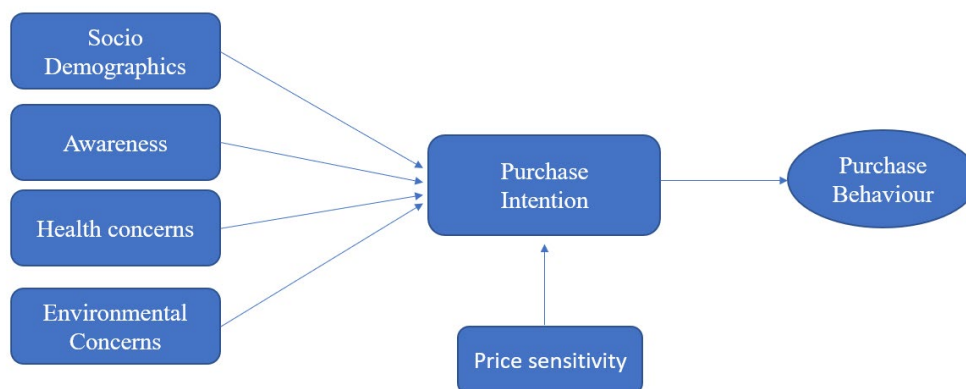
Figure – 3: Conceptual model Pre Covid 19

The factors Post Covid 19 that influence consumers could allow the stakeholders to investigate the many crucial elements that may impact on the organic food marketing industry. Socio -demographics, awareness, health concern, eco-labelling and trust are supposed to be highly noteworthy issues that impact the consumer buying behaviour of organic food. (Figure 4). The price sensitivity factor remains one of the most significant elements in the conceptual model. The research post covid 19 basically outlines that the concern for health is more prominent over environmental concern. This refers to the fact that shoppers get more inspired by their own attributes over other philanthropic factors such as environmental or social concerns. This implies that the organic food industry

is steered by the apparent advantages of organic food to be the healthier option for the consumers and naturally eco-friendly too (Kalra, Shivani & Dixit, Dr & Lyall, Dr. (2021).
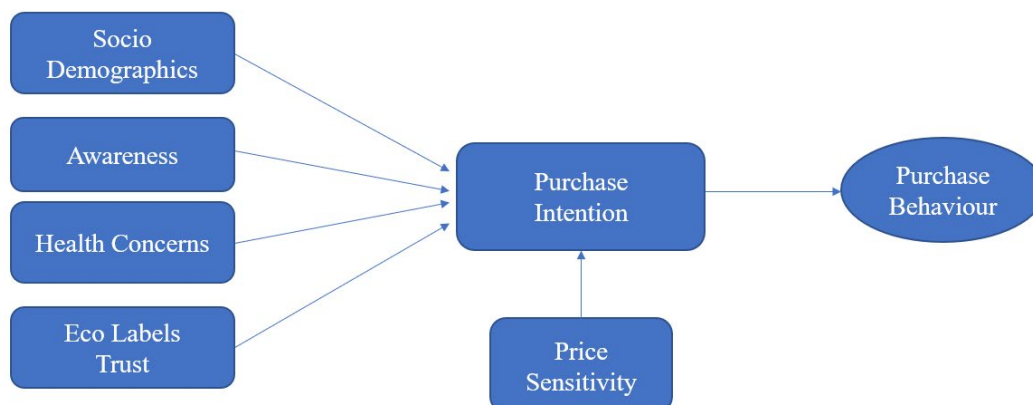
Figure – 4: Conceptual model Post Covid 19

To lessen the information ambiguity, organic consumers must seek out trustworthy, authentic information, which is highlighted by the necessity of knowledge and awareness. Therefore, it is crucial for the development of the organic food business that customers are more informed about eco labels on organic products. Price, however, could be a barrier to turning an organic food purchase intention into an actual one. One of the key methods to address these issues is the certification of organic foods and eco-labels (Dangi, Neeraj, Gupta, Sandeep Narula, Sapna (2020). As consumers increasingly demand and seek out information about the product's quality requirements, manufacturing method, and ingredients, the importance of eco-labels grows Eco-labels encourage trust and sustainability by increasing customer confidence in organic food, which will benefit organic consumers who frequently believe organic food to be of a higher calibre. As demonstrated in (Figure 5), where the x axis is area in ha and the y axis is the year, this has caused a large increase in the area covered by the Organic food certification procedure post-Covid 19.
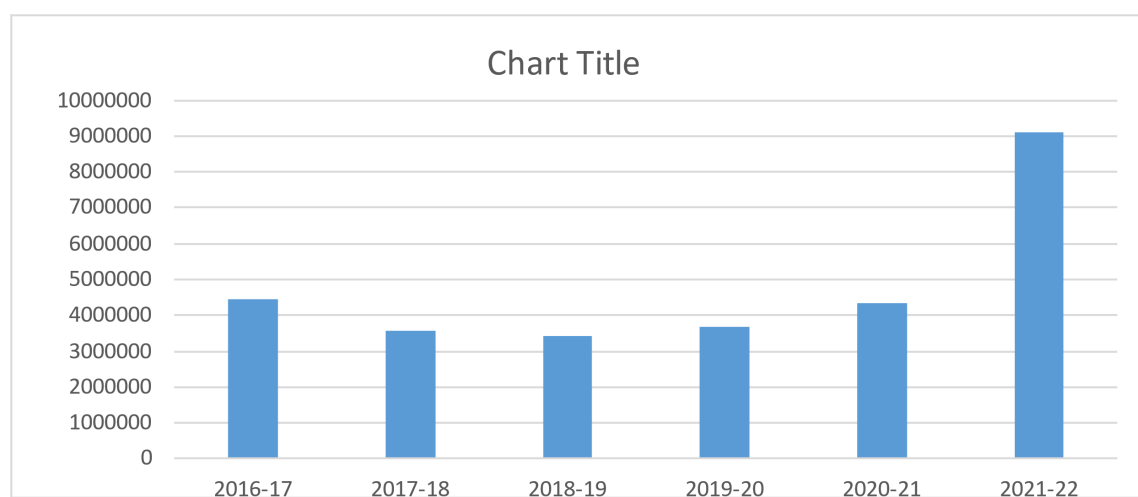
Figure – 5 (Source: APEDA, 2021)

Conclusion & Policy Implications

The primary goal of this study is to compare consumers' actual purchasing patterns for organic food items before and after COVID 19. The study begins by examining the pre- and post-COVID 19 elements affecting consumers' perceptions of organic foods. Second, the study clarifies the influencing elements and attitudes that have an impact on consumers' intentions to buy organic food.

The study's findings have ramifications for producers of organic goods, merchants, and organisations in charge of overseeing the market. It is necessary to establish a suitable approach in light of consumers' worries about health, safety, and eco-labels. By ensuring customer pleasure and delight and paying particular attention to price

sensitivity so that a larger number of populations can afford the same, regulations developed for the organic food business should address customers' awareness and knowledge of organic food items.

Future Guidelines

1. It is obvious that the expanding steps taken by the Government of India to encourage organic agricultural methods among farmers are driving the demand for organic foods in the Indian economy.
2. Though the Government should aid and give subsidies to farmers who are transitioning to organic farming in a timely manner through several government programmes, such as the National Food Security Mission (NFSM), Mission for Integrated Development, National Mission for Sustainable Agriculture (NMSA), and Rashtriya Krishi Vikas Yojana (RKVY).
3. Expos and food festivals should be organised by public and private groups to give aspiring organic food entrepreneurs a platform to interact with customers and retailers, resulting in countless growth prospects for new entrants.
4. Another important aspect of India's total market growth is the significant rise in foreign direct investment (FDI) in the food processing industry.

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EXAMINING THE PERFORMANCE OF CO-OP SHOPS POST PANDEMIC
(COVID-19)

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ABSTRACT
Due to the sudden and unexpected rise of Covid pandemic every person across the globe faced an unforgettable and unmanageable crisis. This affected their financial condition and their growth as well. Though it was the situation, Co-Op shops performed really well with positive growth which helped farmers to make their produce available to the needy consumers. The concept of Co-Op shops reduced the steps related with supply chain and distribution by supplying fresh farm produce to the end users. The Co-Op shop changed the frameworks as well as methodology for channels of distribution. This concept helped farmers for cropping patterns and post harvesting as well. This helped for better management along with continuous fresh farm commodities to the end user.
Keywords: Co-operative Shops, Demand- Supply, Supply chain, Covid 19 impact

Introduction
The pandemic situation of Covid-19 affected entire industries including MSME, which resulted in unemployment, leading to financial instability. The Co-Op shops helped both farmers and consumers being a middleman for providing fresh farm produce to end users. Co-Op shops provide fresh vegetables, fruits and all required farm produce directly from farm to consumers. These Co-Op shops are with housing societies in urban areas where demand for fresh farm produce is more and during the Covid-19 pandemic it was the biggest challenge to provide these goods on a timely basis. Under this concept the residents of housing societies got fresh goods at affordable prices by minimizing steps related to channels of distribution.

Review Of Literature
Harold (1987) said that the dairy cooperatives appear to be slowly transforming the nature of dairy production in the project. Friday (2021) covers the operations, formations, accounting system, annual reporting format and how to determine the dividend-sharing formula for every cooperative society. Cote (2019) narrates the theoretical level; our work has allowed us to develop three key ideas on which is based our conception of the management of cooperatives. A cooperative equilibrium model that aligns values and cooperative principles leading to a proper management framework better adapted for cooperatives. Mattas, Baourakis & Zopounidis (2018) find on collective management processes and cooperative initiatives within various sectors, offers crucial insights into the building of powerful tools for decision making in cooperative management systems. Dijk, Sergaki & Baourakis (2019) analyze the core elements of cooperative management. Fairbairn, (2001) Zopounidis, Kalogeras, Mattas, Dijk & Baourakis (2014) Presents new modelling tools for the analysis of agricultural and environmental policy, explains recent trends in agricultural cooperative systems and offers a powerful environment for decision making. it contends that re-centring movement agencies can better explain co-operative fortunes. For, it is argued, new co-operatives do not grow in a vacuum; they emerge from within a field of already existing co-operatives and assorted social movement ties. They are not merely socially embedded forms of economic action; they are democratically structured and member-controlled forms of economic action that emerge from within historically specific ensembles of social relations. Davis (1999) A conclusion is drawn that "organisations operating on the basis of community and mutuality are best placed to define customer quality standards as they can situate the whole person in their community... This provides a potential for identification of additional added value for the consumer and hence a competitive advantage for the cooperative. Issac & Williams (2017) says that building Alternatives provides an honest appraisal of a heroic venture of a cooperative enterprise, demonstrating that cooperatives are not only able to survive in a small niche, but are able to grow into substantial institutions within the social life of a region. The book does not gloss over the problems that come with this history, providing a rich empirical account that helps us learn from the challenges and successes. The story of ULCCS is not merely an inspiration to the world, but a guidebook to the resilience of cooperatives as alternatives within capitalism. Indian Cooperative Movement, A Statistical Profile-2018 report explains that, within a short span of time, the role of cooperatives extended beyond agricultural

credit. Rural cooperative societies are now entering into real estate, power, insurance, health-care and tourism sectors. Cooperatives have tremendous opportunities in solving the problem of unemployment, by training the rural population through cooperatives can be a big leap forward. Co-operative movement in our country shall not only stay, but also grow in times to come. 20th Annual Report FY. 2019-2020

National Cooperative Development Corporation (NCDC), a Statutory Corporation under the Ministry of Agriculture and Farmers Welfare was established on 14.03.1963 under an Act of Parliament (NCDC Act of 1962) for economic development through cooperative societies. The major objective of the Corporation is to promote, strengthen and develop the farmers' cooperatives for increasing production and productivity and instituting post-harvest facilities. The Corporation's focus is on programmes of agricultural marketing and inputs, processing, storage, cold chain, and marketing of agriculture produce and supply seeds, fertilizer and other agricultural inputs etc. In the nonfarm sector, the Corporation's endeavour is to equip cooperatives with facilities to promote income generating activities, with special focus on weaker sections such as dairy, livestock, handlooms, sericulture, poultry, fishery, scheduled caste & scheduled tribes, women cooperatives etc. Na National Cooperative Development Corporation (NCDC), a Statutory Corporation under the Ministry of Agriculture and Farmers Welfare was established on 14.03.1963 under an Act of Parliament (NCDC Act of 1962) for economic development through cooperative societies. The major objective of the Corporation is to promote, strengthen and develop the farmers' cooperatives for increasing production and productivity and instituting post-harvest facilities. The Corporation's focus is on programmes of agricultural marketing and inputs, processing, storage, cold chain and marketing of agriculture produce and supply seeds, fertilizer and other agricultural inputs etc. In the nonfarm sector, the Corporation's endeavour is to equip cooperatives with facilities to promote income generating activities, with special focus on weaker sections such as dairy, livestock, handlooms, sericulture, poultry, fishery, scheduled caste & scheduled tribes, women cooperatives etc. national Cooperative Development Corporation (NCDC), a Statutory Corporation under the Ministry of Agriculture and Farmers Welfare was established on 14.03.1963 under an Act of Parliament (NCDC Act of 1962) for economic development through cooperative societies. The major objective of the Corporation is to promote, strengthen and develop the farmers' cooperatives for increasing production and productivity and instituting post-harvest facilities. The Corporation's focus is on programmes of agricultural marketing and inputs, processing, storage, cold chain and marketing of agriculture produce and supply seeds, fertilizer and other agricultural inputs etc. In the nonfarm sector, the Corporation's endeavour is to equip cooperatives with facilities to promote income generating activities, with special focus on weaker sections such as dairy, livestock, handlooms, sericulture, poultry, fishery, scheduled caste & scheduled tribes, women cooperatives etc.

Objectives
1. To understand the Co-Op shop and its sustainability post Covid-19.
2. To analyse the consumers' feedback on Co-Op shops.

Hypothesis
H1. Co-Op shops are sustainable over other shops.
H2. Co-Op shops hold the success for creation of a consumer base.

Research Methodology
Post pandemic Co-Op shops made excellent growth and stood up in the market as an emerging platform for farmers as well for consumers. Co-Op shops provide fresh farm produce with good quality commodities. The functionality of these Co-Op shops is based on some of the constraints like; time, price, sources and quality.
The above mentioned constraints are considered and a set of relevant questionnaires was framed to understand the success of Co-Op shops. To understand the effectiveness, a well designed questionnaire with Likert scale was circulated among seventy respondents from Co-Op housing societies. The quantitative research approach along with descriptive research design was used for convenience and purposive sampling method.
The data was collected with the help of a questionnaire to understand the opinion of respondents. The questionnaire ranged perceptions like time, price, convenience, supply and level of service.

Data Analysis
Frequency Distribution
The frequency distribution of respondents according to Questions for Hypothesis1 along with it's bar graph is as given below.

Questions for Hypothesis1	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Total
Were the facilities provided by Co-Op	2	3	10	50	35	100

shops during Covid -19 helpful?						
%	2.0	3.0	10.0	50.0	35.0	100.0
Are you agree that the prices of commodities available in the Co-Op shops were matching with your budget?	7	5	20	29	39	100
%	7.0	5.0	20.0	29.0	39.0	100.0
Do you agree that products you were getting directly from farm?	1	1	7	39	52	100
%	1.0	1.0	7.0	39.0	52.0	100.0
Do you agree that the prices of commodities at Co-Op shops suites pockets of all classes?	2	4	9	49	36	100
%	2.0	4.0	9.0	49.0	36.0	100.0
Were the daily needs available at Co-Op shops on regular basis?	4	7	11	44	34	100
%	4.0	7.0	11.0	44.0	34.0	100.0
Do you agree that these channels will change consumer behavioural approaches?	1	3	1	50	45	100
%	1.0	3.0	1.0	50.0	45.0	100.0
Do you agree that these Co-Op shops will be beneficial for consumers as well as farmers in upcoming future?	2	5	5	42	46	100
%	2.0	5.0	5.0	42.0	46.0	100.0
Would you like to refer Co-Op shops to your relatives and friends?	1	3	4	44	48	100
%	1.0	3.0	4.0	44.0	48.0	100.0

Table1: Questions for Hypothesis1
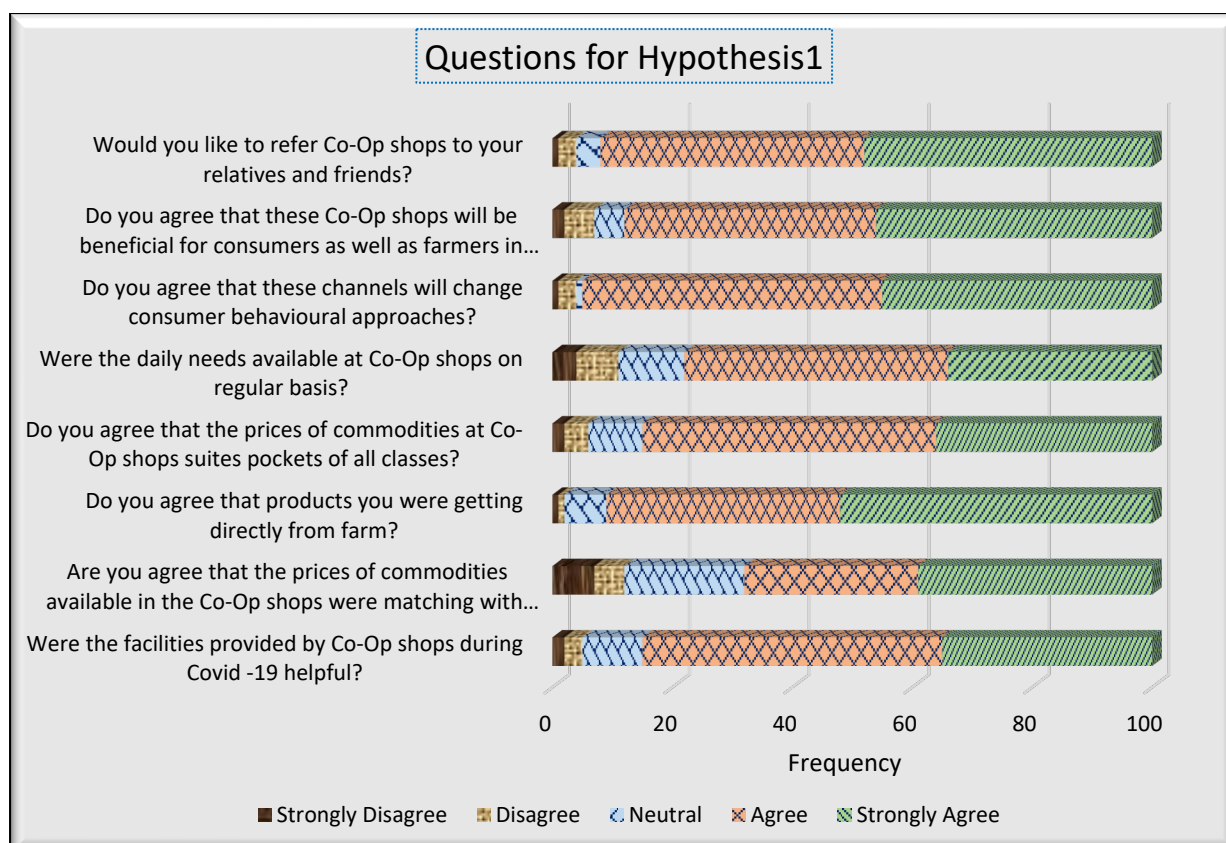
The frequency distribution of respondents according to Questions for Hypothesis2 along with its bar graph is as given below.

Questions for Hypothesis2	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Total
Do you think that Co-Op shops were capable of fulfilling your daily needs?	2	1	14	36	47	100
%	2.0	1.0	14.0	36.0	47.0	100.0
How much were you with the hygiene of commodities available in the Co-Op shops?	4	7	4	40	45	100
%	4.0	7.0	4.0	40.0	45.0	100.0
Do you agree that the prices were justifying with the quality?	2	5	10	35	48	100
%	2.0	5.0	10.0	35.0	48.0	100.0
Are you convinced with the genuine source of the commodities?	1	1	3	50	45	100
%	1.0	1.0	3.0	50.0	45.0	100.0
Were you happy in terms of prices of commodities as compared with outside market?	6	8	18	37	31	100
%	6.0	8.0	18.0	37.0	31.0	100.0
Were you satisfied with the services provided by Co-Op shops?	2	4	5	47	42	100
%	2.0	4.0	5.0	47.0	42.0	100.0
Do you agree that Co-Op shops provide the commodities as per the demand of consumers?	3	1	13	50	33	100
%	3.0	1.0	13.0	50.0	33.0	100.0

Table2: Questions for Hypothesis2
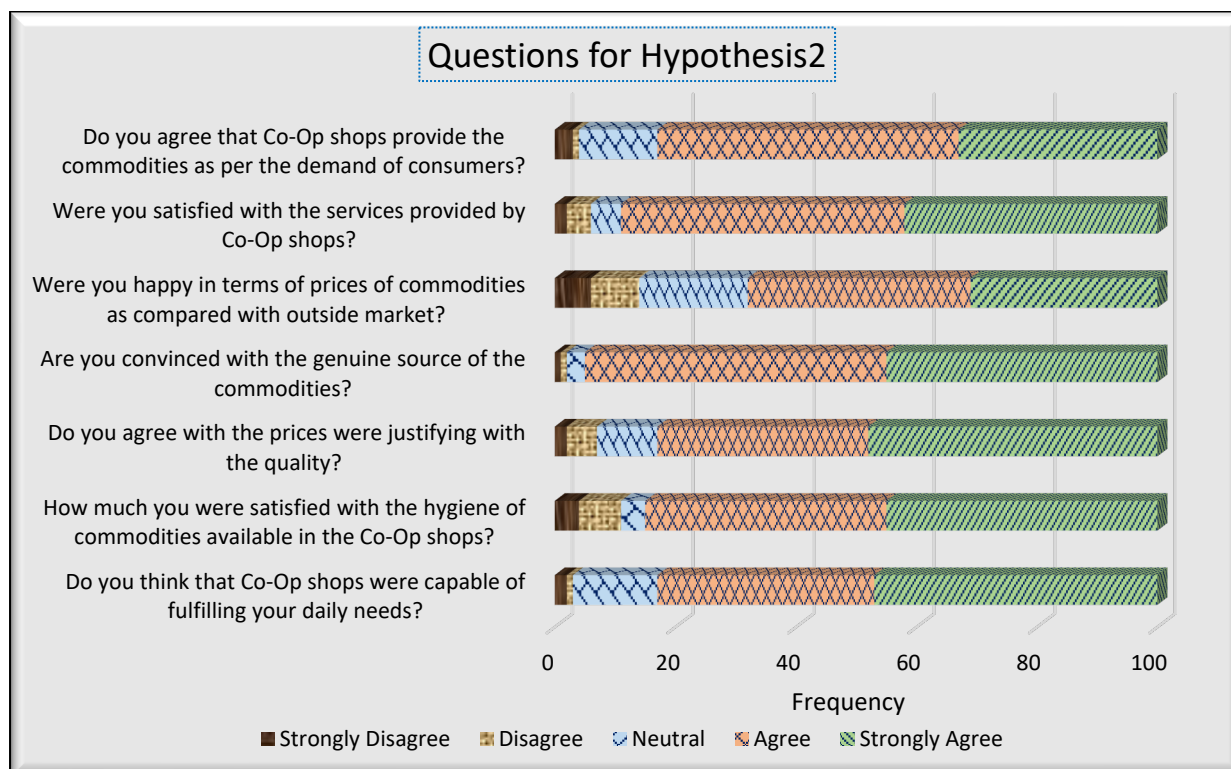
Hypotheses

The parameter of interest in all the hypotheses is the proportion of respondents favoring the hypothesis & using such a sample proportion it would be decided whether the proportion is adequate or not, that is whether it is significantly greater than 50% or not. Hence significant results would imply that the population proportion under consideration is adequate that is greater than 50%. Since the parameter of interest is proportion; to test the hypothesis, the test used is z test for proportions. Here the hypothetical value of proportion is taken as 50%.

Hypothesis1: Co-Op shops are sustainable over other shops.

To test the hypotheses,

The null hypothesis, H_0:

Co-Op shops are not sustainable over other shops.

Vs.

The alternative hypothesis, Ha:

Co-Op shops are sustainable over other shops.

The test used is the z test for proportions.

Test statistics:

$$Z = \frac{\hat{p} - p_0}{\sqrt{\dfrac{p_0(1-p_0)}{n}}}$$

Here $\hat{p}$ = sample proportion, p_0 = hypothetical value = 50% = 0.50, n = sample size = 100

Calculation table:

Sr. No.	Questions	Frequency (Agree + Strongly Agree)	Proportion	Z Statistics	P value	Significance
1	Were the facilities provided by Co-Op shops during Covid -19 helpful?	85	0.85	7.00	0.0000	Significant
2	Are you agree that the prices of commodities available in the Co-Op shops were matching with your budget?	68	0.68	3.60	0.0002	Significant
3	Do you agree that products you were getting directly from farm?	91	0.91	8.20	0.0000	Significant
4	Do you agree that the prices of commodities at Co-Op shops suites pockets of all classes?	85	0.85	7.00	0.0000	Significant
5	Were the daily needs available at Co-Op shops on regular basis?	78	0.78	5.60	0.0000	Significant
6	Do you agree that these channels will change consumer behavioural approaches?	95	0.95	9.00	0.0000	Significant
7	Do you agree that these Co-Op shops will be beneficial for consumers as well as farmers in the upcoming future?	88	0.88	7.60	0.0000	Significant
8	Would you like to refer Co-Op shops to your relatives and friends?	92	0.92	8.40	0.0000	Significant

Table 3 calculation table

If p value < 0.05, the level of significance; the alternative hypothesis is accepted.

Since p value is less than 0.05 for 8 questions out of 8 questions; the alternative hypothesis can be accepted for all questions.

Conclusion:
For all the questions an alternative hypothesis is being accepted.
Hence Co-Op shops are sustainable over other shops.
Hypothesis1 is accepted.

Hypothesis2: Co-Op shops hold the success for creation of a consumer base.
To test the hypotheses,
The null hypothesis, H_0:
Co-Op shops don't hold the success for the creation of a consumer base.
Vs.
The alternative hypothesis, Ha:
Co-Op shops hold the success for the creation of a consumer base.
The test used is the z test for proportions.
Test statistics:

$$Z = \frac{\hat{p} - p_0}{\sqrt{\dfrac{p_0(1 - p_0)}{n}}}$$

Here $\hat{p}$ = sample proportion, p_0 = hypothetical value = 50% = 0.50, n = sample size = 100
Calculation table:

Sr. No.	Questions	Frequency (Agree + Strongly Agree)	Proportion	Z Statistics	P value	Significance
1	Do you think that Co-Op shops were capable of fulfilling your daily needs?	83	0.83	6.60	0.0000	Significant
2	How much you were satisfied with the hygiene of commodities available in the Co-Op shops?	85	0.85	7.00	0.0000	Significant
3	Do you agree with the prices were justifying with the quality?	83	0.83	6.60	0.0000	Significant
4	Are you convinced with the genuine source of the commodities?	95	0.95	9.00	0.0000	Significant
5	Were you happy in terms of prices of commodities as compared with outside market?	68	0.68	3.60	0.0002	Significant
6	Were you satisfied with the services provided by Co-Op shops?	89	0.89	7.80	0.0000	Significant
7	Do you agree that Co-Op shops provide the commodities as per the demand of consumers?	83	0.83	6.60	0.0000	Significant

Table NO. 4 calculation table

If p value < 0.05, the level of significance; the alternative hypothesis is accepted.
Since p value is less than 0.05 for 7 questions out of 7 questions; the alternative hypothesis can be accepted for all questions.
Conclusion:
For all the questions an alternative hypothesis is being accepted.
Hence Co-Op shops hold the success for the creation of a consumer base.
Hypothesis is accepted.

Findings

i. Co-Op shops are giving additional market to the farmers as they are getting more opportunities to sell their products without any middlemen.

ii. Consumers are getting options along with traditional market to get fresh goods directly to their societies.

iii. The concept of these Co-Op shops are sustainable in upcoming period of time as this The concept is new to consumers as they are preferring the same as well.

iv. Due to these channels farmers are getting an opportunity to decide their cropping patterns and saving their efforts.

v. It helps to reduce post harvest losses of farm produces i.e. losses during handling multiple times during supply chain management which helps to save costs incurred for cold storage.

Conclusion

From the above discussion it can be concluded that consumers are using these Co-Op shops as it meets their expectations in terms of prices, fresh availability and genuine source of fresh commodities. Farmers are getting additional markets in addition to traditional markets where they can sell their goods directly to the end user. Co-Op shops assist farmers to decide their cropping patterns which helps consumers to get fresh farm produce and which leads to avoidance of post-harvest losses, which helps to develop ecosystems for farmers as well as consumers. Considering these aspects Co-Op shops are having a good future in the upcoming period.

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FACTORS IMPACTING ENGAGEMENT AT WORK: A LITERATURE REVIEW

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ABSTRACT
By examining pertinent literature, the goal of this study is to comprehend the factors that can affect employee engagement at work. The article's summary of the review's findings is based on a thorough understanding of the literature that is currently accessible on the issue. Previous research has demonstrated the influence of a number of elements on workplace engagement, including communication, teamwork and collaboration, learning opportunities, career growth opportunities, fair pay transparency and honesty, workplace autonomy, employee appreciation, and employee health. As a result of this study's explanation of how specific characteristics affect workplace engagement, organizations can include these components into the working environment. This study focuses on elements that affect employee engagement and pleasure at work. The report specifically includes an overview of the research on the elements that promote workplace engagement.
Keywords: workplace engagement, culture, growth opportunities, fair pay, employee appreciation.

Introduction

Psychologists and social theorists have regarded workplace involvement as an important source in a range of situations. A person must feel good, not experience any negative emotions, and feel generally engaged in their work to contribute to the success of a company and their own personal development.

The need for an opportunity to assess the genuine level of employee engagement exists in every organization. If a corporation doesn't know how much of its work is joyful, it may lose focus in its efforts to structure its organization and manage its workforce.

Increased productivity from a worker is not always a sign of engagement; it could be the result of anxiety or uncertainty. But can the company foster a culture where people work because they enjoy their jobs rather than out of fear or insecurity? Although measuring workplace engagement is mostly diagnostic in nature, given management's goal, strategic workplace engagement should now receive greater attention. The following four processes can be used to develop and implement a strategy for enhancing workplace engagement: defining workplace engagement, identifying the factors, taking action, and monitoring results.

Despite the businesses' increased emphasis on human capital, this crucial aspect of organizational performance has received little attention. Employee engagement is a key goal for any successful firm. Therefore, a focused employee engagement survey is necessary to shed more light on measuring the factors that can affect employee engagement at work. The current paper's goal is to review the relevant scientific research on the key factors influencing workplace engagement.

Objective of the study

Numerous earlier research has focused on the development of workplace engagement initiatives and how they affect productivity. These results emphasize the importance of comprehending the part that employee engagement plays in accomplishing corporate objectives.
To better grasp the conceptual nature of workplace engagement, this study makes an effort to synthesize the body of literature that has been written about the topic. This study presents in-depth analyses of the research on the factors influencing workplace engagement.

Summary of Review of Literature

There are some research papers about the topic in the literature. According to Mansor and Hassan (2016), employee engagement is positively and significantly impacted by the five factors of employee engagement: communication, cooperation and collaboration, job role, corporate management, and learning and development.

Accpording to Kavitha, Salimat (2013), employee organizational behavior is said to be affected by organizational effectiveness and employee engagement, both of which have a big impact on organizational

performance. The idea that employees are working hard, caring about the firm, and being loyal to it are all promoted by healthy employee engagement. The employees have a positive opinion of the business and its guiding principles. Business productivity and effectiveness are impacted by it, and its use, importance, and popularity are all rising swiftly. Employee engagement highlights the importance of employee communication to a company's success. Therefore, a company's competitive position should be attributed to its employees more than to any other component.

Singh & Rekha (2016) says that this study's major goal was to understand and look into the factors that may influence employee engagement. A review of pertinent research studies reveals that factors such as employee empowerment, governance, training, flexible welfare policies, employee involvement initiatives, personal spirituality, job satisfaction, justice, leadership style, internal communication, communication styles, obvious career growth opportunities, CSR initiatives, organization and supervision support, emotional intelligence, and others play a significant role in fostering an environment that fosters leadership. The company must put a strong emphasis on each of the aspects in order to boost employee engagement.

Shani and Indhira (2014) determine what factors are important for fostering or hindering employee engagement, as well as what makes ITES employees happy and worn out. Complete engagement, which considers both worker engagement and psychological well-being, can present a useful tactic for boosting organizational effectiveness in the real world. Studies show that both factors have a favorable effect on organizational productivity, and it is theoretically plausible that the effect is more than the separate factors. This viewpoint is reinforced by some preliminary study results that show that the correlations between participation and positive outcomes are strengthened when psychological well-being, which encompasses happiness and tiredness, is considered. The notion that promoting long-term relationships requires good psychological health.

Enhancing organizational performance through the integration of psychological health into the concept of full involvement may be a practically workable approach. Studies show that both factors have a favorable effect on organizational outcomes, and it is theoretically plausible that the combined effect is greater than the effects of the separate factors. This viewpoint is reinforced by some preliminary study results that show that the correlations between participation and positive outcomes are strengthened when psychological well-being, which encompasses happiness and tiredness, is considered. The notion that psychological wellness is essential for generating sustained levels of Additionally, it indicates that work involvement is in line with theoretical predictions and past study findings. Higher levels of psychological wellbeing are linked to specific behavioral patterns that are thought to boost engagement.

Altaf & Khan (2015) says that work engagement is one of the key areas facing the modern corporate sector. The goals of the study were breaking down employment obstacles, developing useful organizational initiatives, and identifying critical organizational characteristics that influence employee engagement. This study advances understanding of the importance of employee engagement in an organization and helps the relevant party better grasp the causes and effects of numerous influencing elements. The study provides a fresh interpretation and perspective in a positive way and contributes to the success of any firm. Finding the motivating factor behind employee engagement has received a lot of attention. This study aims to investigate the key variables that influence employee engagement in Pakistan.

Chaudhry, Ansari, Nisa, & Mahesar (2016) utilized as a mediator in Islamic banks in Pakistan, influences employee outcomes when Islamic human resource management (HRM) is used. The results demonstrated that Islamic beliefs are taken into consideration when performing HRM activities by several banks. Findings from regression and correlation analyses indicate a significant and powerful relationship between Islamic HRM and employee results. The results of the multiple regression analysis demonstrated that employee engagement acted as a mediating factor in the relationship between Islamic HRM and employee outcomes.

According to Deloitte (2016), 85% of executives place a high value on employee engagement, and as a result, on improving it, millions of dollars are invested. Employee engagement is linked by several writers to organizational aspects including the workplace, rewards, and recognition. Nevertheless, "spirituality" in the workplace is one of the crucial elements that has, up to now, gotten less attention. The authors of this study made the case that having a spiritual workplace culture will boost employee engagement levels and offered suggestions on how to increase organizational spirituality.

Roof & Richard (2015) say that despite the fact that both employee engagement and spirituality, despite the fact that despite the fact that neither employee engagement and spirituality have attracted a growing interest from academics and practitioners, despite the fact that both theories are still in its infancy and lack a clear conceptions

and definitions The potential of improving labor circumstances and organizational success has been verified by newly emerging empirical studies on engagement and spirituality. A cross-sectional study was conducted to examine self-reported individual spirituality as measured by the DSES and employee engagement measured using the UWES-9 including the dimensions of vigor, dedication, and absorption in response to the call from theorists to investigate engagement antecedents and specifically the relationship between spirituality and employee engagement. After establishing demographic representativeness and determining the using multiple regression while correcting for, a snowballing convenience sample produced 124 valid surveys.

Conclusion

In today's cutthroat business world, getting top talent and keeping them around for an extended length of time is challenging. An organization has a multigenerational staff. An engagement policy won't be successful if it ignores the various factors that contribute to these people's enjoyment at work. It is vital to look into the many signs that can actually increase workplace engagement.

In the present study efforts were made to understand these factors by filtering the research studies done on workplace engagement. The important factors of workplace engagement which came out were meaningful relationships at work, meaningful work, supportive work environment, career development opportunities, positive emotions, flexible welfare policy, employee involvement programs, High Performance Work Practices (HPWPs), leadership communication style

After consideration, it is established that all other research factors should be included and that workplace engagement cannot be achieved exclusively through leisure activities, birthday celebrations, job changes, etc. The varied and multigenerational workforce should be taken into consideration when developing workplace engagement rules.

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FINTECH AND BEYOND

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ABSTRACT
Fintech refers to the integration of technology into the financial services sector to enable novel and innovative methods of providing financial services. Blockchain technology, crowdfunding, mobile payments, and other concepts serve as examples. Fintech is reshaping how people access and interact with financial services by enhancing simplicity, transparency, and security. As the fintech business expands, fresh and creative solutions will emerge to meet the demands of the financial services industry.
Fintech was first employed in the 1990s, but it wasn't until 2014 that investors and business owners began to take notice of it. Fintech is the name given to financial technology. Of course, technological advancements have always had an impact on the financial sector, changing how it operates.
Fintech was first used in the 1990s, but investors and business owners didn't start to pay attention to it until 2014. Financial technology is known as fintech. Of course, the financial industry has always been affected by technological changes, which have altered how it functions. It is a method of providing financial services that makes use of mobile devices, computer software, and virtual currencies. It also holds true for the development and trading of cryptocurrencies (e.g., Bitcoin, Dogecoin, Ether).
Keywords: finance, technology, banking, transaction, digitization

Introduction

It is, as the name implies, the application of technology in the financial services sector. It explains and enumerates recent technological advancements meant to enhance and automate financial services.
We anticipate that the expansion of fintech will be revolutionary in the years to come, displacing conventional methods with cutting-edge ones.
The market for fintech includes:

- **LENDING-** People may now apply for loans online and have them approved promptly without having to visit banks or other financial organizations.

- **PAYMENTS -** Businesses let individuals send money amongst themselves without using a bank. Blockchain technology is used by fintech companies to enable consumers to send money swiftly and efficiently. Using Paytm, Google Pay, etc. as examples.

- **INTERNATIONAL MONEY TRANSFER-**Banks and conventional money transfer businesses charge up to 8% in fees for international money transfers. Even worse, standard transfers take a while. These financial technology firms provide quicker, more affordable international money transfers.

- **PERSONAL FINANCE-** The market for financial technology also includes a significant segment for personal finance. For personal money guidance in the past, customers had to speak with financial counsellors at banks. There are many apps available right now that can give guidance and assist with budgeting. Anywhere, at any time, consumers can obtain financial guidance.

- **EQUITY FINANCING-** Financial technology businesses are also revolutionising equity financing. Businesses can raise capital more easily thanks to companies in this segment of the FinTech market. Investors find virtual fundraising to be simpler because everything can be done online.

- **CONSUMER BANKING-** Because traditional banks have hefty fees, businesses in this category provide customers an alternative.

● **INSURANCE-** Financial technology businesses have recently extended out into the insurance market, too. Distribution is a major priority for many businesses in this category. To target people that are underserved by insurance, they are utilising new technologies like apps.

Review Of Literature

The word "fintech," or financial technology, is used to describe a number of technologies being utilized to upend the conventional banking and financial services sector. This covers innovations like cloud computing, blockchain, artificial intelligence, and machine learning. The way financial services are offered, used, and regulated is being rapidly altered by fintech (Feyen & Frost 2021). Fintech usage is rising quickly, especially among small and medium-sized organisations.

The financial industry cannot function without technology. Technologies support the bank's efforts to reduce operational costs, increase productivity, and decrease credit risk. The tools also enable the bank to interact with and maintain relationships with customers (Cheng & Qu, 2020; Lee & Shin, 2018; Goldstein, 2019; Thakor, 2020). The advancement of technologies in the banking industry has led to the emergence of a brand-new form of firm known as a fintech company. The technology platform enables the fintech company to provide financial solutions with features comparable to those of banking products. The financial company also sells new products (e.g., cryptocurrencies). New products are known to younger generations, such as the millennial generation (Jünger & Mietzner, 2020; Pu et al., 2021).

Over 70% of small and medium-sized enterprises are now embracing fintech in some capacity for their financial operations, according to a recent World Bank poll. This is because fintech may give businesses access to cash, more effective payment methods, and improved customer support. Fintech is employed in consumer finance in addition to being used by enterprises.

The banking industry is changing quickly. The digital technology-driven change in payments, loans, insurance, and wealth management has been accelerated by the COVID-19 epidemic. Along with increasing variety, competition, efficiency, and inclusion in financial services across many economies, this may lead to a rise in market concentration.

Fintech companies must face some unpleasant realities despite the high hopes for the technology. They mostly struggle with understanding users, achieving product-market fit, and developing a strong value proposition for their service-based goods. Venture capitalists, who seek out unique, distinguishing solutions with a high potential for growth, are a major source of funding for the fintech industry (McDonald 2020)

Objective

1. To find out the preference of consumer why they prefer these apps.
2. To find out the preference of Vendors why they prefer these apps.
3. Mostly which region people are using these platforms?
4. How to attract more no. of consumers in rural areas too
5. How to improve more these platforms
6. How to grow these platforms further as they have reach the maturity stage and how to market their platform further in every area

Research Gap

The first item on the research agenda is to examine the structure and progression of technological development in the financial industry. In addition, the bulk of current studies mainly analyse the short run, giving little attention to the middle or long runs. It is obvious that there is a lack of adoption of empirical research, comparative case studies, and historical and global comparisons.

Understanding how conventional banks and financial institutions are reacting to the rise of fintech is another area of fintech study that is lacking. There is little information on how traditional banks and financial institutions are using fintech to their advantage or modifying their business models and tactics to compete with it. Additionally, there is a dearth of information about the partnerships and investments made by conventional banks and financial institutions with fintech businesses. Finally, there is a dearth of study on how fintech is affecting regulation, consumer behaviour, and economic stability in the financial services sector.

Risks to financial stability were uncovered by the global financial crisis. Some other points that can be considered are:

- FinTech finance in India had a 3X increase in 2021; by 2030, it is predicted to have $1 Tn in AUM and $200 Bn in revenue.
- The practice of "Buy Now, Pay Later" has gained popularity and is on an accelerated growth trajectory, dominating both B2C and B2B payments.
- The industry is seeing an increase in funding and is anticipated to reach $88 Bn in size by 2030 because of substantial untapped insurance potential and cutting-edge InsurTech models. Market expansion will be fuelled by health insurance innovation combined with government digital initiatives.
- The financial inclusion revolution being experienced throughout the nation has been fueled by the India stack and innovation by FinTechs. To serve the Tier 3+ market, innovative solutions are being implemented.
- India has the chance to close the global digital skills gap and position itself as the top destination for digital and tech talent thanks to a 5X surge in the number of people with digital and tech skills. Emerging technologies, shifting cultural norms, and a supportive regulatory environment have all contributed to FinTech's exponential growth. Big bets include Agri+FinTech and Prop+FinTech.

Research Methodology

Few of the major Fintech Company are as follows:

1. **GOOLE PAY**:

In order to support in-app and tap-to-pay transactions on mobile devices, Google developed Google Pay, a digital wallet and online payment system that enables users to make payments with Android phones, tablets, or watches. The peer-to-peer payment service Google Wallet was introduced in 2011, and Google Pay is its successor. Users of Google Pay can keep gift, loyalty, debit, and credit cards on their device. Additionally, they can use the service to pay for rides on public transportation, send money to other users, and shop faster.

A growing number of businesses, including fast food restaurants, coffee shops, retail stores, convenience stores, and more, now accept Google Pay.

Google Pay gives consumers the option to add a PIN, fingerprint scan, or face recognition in order to protect client payment information. Additionally, it stores encrypted payment information on fortified Google servers that have multiple security features. In order to safeguard it from attacks, all payment information is further held locally on the user's device.

2. **PHONE PE:**

PhonePe, a company that offers digital payments, was launched in December 2015 and is intended to support more than 11 languages. One of the earliest payment apps to be built on the UPI platform, it is hailed as the first UPI payments app to surpass the milestone of one billion transactions. Users of the app can send and receive money, check bank balances, make POS payments, buy gold, and perform a number of other tasks using the app, including phone recharge, DTH payments, energy, gas, and other bill payments.

3. **PAYTM:**

Vijay Shekhar Sharma founded Paytm in 2010 in Noida as a part of one97 communication. One business that helped kick off India's digital transformation was Paytm. Paytm began to grow its user base by providing cashback and other discounts in its early years, which drew a sizable consumer base and sparked the digital revolution. It began with wallet payments before expanding to UPI and other payment gateways.

4. **FREECHARGE:**

The company is situated in Gurugram. With funding from Sequoia Group and the Tandon Group, it was founded in 2010 by Kunal Shah and Sandeep Tandon. The second-largest buyout in Indian e-commerce occurred in 2015 when Snapdeal acquired Freecharge. A 99 percent success rate and an average transaction time of 10 seconds are reported by Freecharge. The average monthly usage is over five, and the customer retention rate is 70%.

5. **AMAZON PAY:**

Amazon Pay is an online payment service that is developed and operated by Amazon. It allows customers to pay for goods and services using their Amazon accounts. Customers can add their payment methods, such as credit cards, debit cards, and bank accounts, to their Amazon accounts and use them to pay for goods and services. Amazon Pay also supports multiple payment options, such as single-click payments, Amazon Coins, and Amazon gift cards.

Data Analysis

Consumers

Particulars	GOOGLE PAY	PAYTM	PHONE PE	FREECHARGE	DON'T USE ANY OF THESE
Number Of Responses received	75	52	52	15	6
Age Group					
18-25	60	50	47	15	-
25-40	13	2	2	-	-
40-60	2	-	3	-	6
Region, they Belong to					
Urban	68	35	32	15	10
Rural	7	5	8	0	20
Why do they use it	Most people use it because it is convenient and easy to use it and there are less transaction failure	Most people use it because of flexibility and diversity of facilities	Because smooth and easy interface	It is easy for them to use	People don't use because of lack of trust on online payment and are not fluent in payment

Table 1: Data Analysis of 200 consumers on the basis of mentioned parameters.
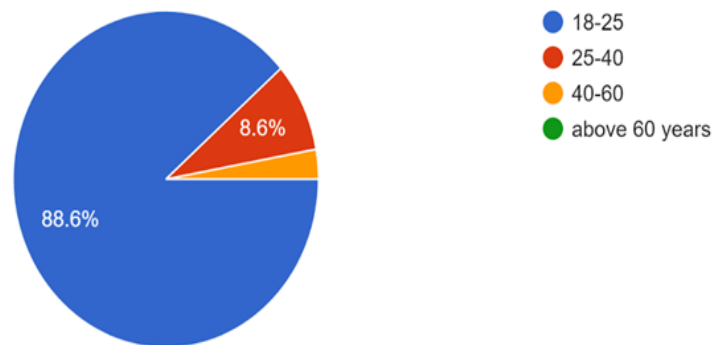
Fig1: Age Distribution of consumer
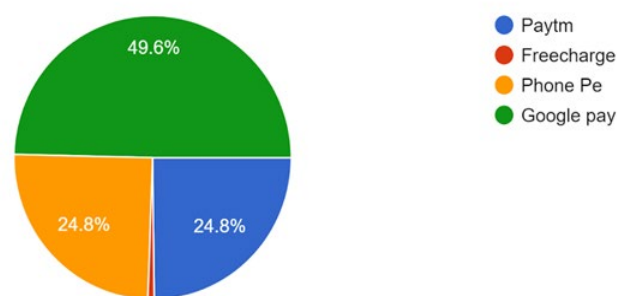
Fig 2: Fintech Application Preference of the consumer

Findings

To begin with the data analysis and interpretation of the responses, firstly we have performed the descriptive analysis of the study. It helps to summarize and define the characteristics of the huge numbers of data which aims to describe the data's condition.

The Pie chart above Shows the age group of people who uses these app. The table above show the number consumers which app they prefer the most.

According to the data we collected most of the consumers prefer Google pay. Some people prefer certain apps because of their ease of use, while others may prefer them because of their feature set. Additionally, some people may prefer an app because of its aesthetics, while others may prefer it because of its price. So, it's an foreign app which still have holding in our app we have to work on our apps because UPI is the discovery of decade in India

The main reason vendors as per the data we collected **90%** prefer these apps is because they provide a convenient and efficient way to manage their businesses. The apps allow them to easily manage their inventory, track sales, and process payments. The main purpose of these apps is to make their business easy.

There can be Proper education to vendors of how can they use these apps because according to the data we collected there are different charges for different vendors from these apps
The use of payment platforms varies by region, Urban and Rural. But mostly it is the urban people who are using these apps. According to the data we collected from both urban and rural regions we saw that most of the people living in rural areas do not prefer these apps and mostly urban people do. There is a big gap between them and the companies have to reduce that gap.
Educate rural customers about the benefits of cashless transactions: Educate rural customers about the benefits of cashless transactions such as convenience, security, and cost savings.

The widespread usage of cell phones and the Internet has aided in the growth of the fintech sector in India. With over 6,000 companies, the Indian fintech market was valued at $50 billion in 2021 and is expected to grow at a

CAGR of 31% from 2021 to 2025. If it keeps growing at this rate, its value ought to reach close to $150 billion by 2025. India (87%) has a substantially higher fintech adoption rate than the rest of the globe. 65 percent. When examining the data above, the picture seems pretty optimistic, but when we delve more, we discover that there is a significant demographic, especially in the rural areas.

According to the data collected by us , Payment platforms should make sure that all customer data is secure and encrypted. They should employ the latest security measures to prevent malicious actors from accessing customer data. Payment platforms should offer customers the ability to pay with their preferred payment option. This could include credit cards, debit cards, online banking transfers, and even cryptocurrency. Payment platforms should provide customers with 24/7 customer support. This could include a live chat feature, phone support, or even email support.

The more emphasis is to be given on these points:

- Marketing in rural areas- Maturity reached, no further growth

- New payment mechanism- eg watch (tie up with watch manufacturer

- US has taken mastercard and visa card globally, every country uses it, So Why not India take UPI to world platform

- Tie up of foreign bank with UPI

Limitation
- Education
- Age group above 50, are still resisting in using UPI
- Rural Area Network problem
- Black money
- Daily Limit issue
- Banking Infrastructure

Suggestions
The advantages of fintech must exceed the risks, at least in the medium to long term. Fintech technology will only become more pervasive in daily transactions as their usage increases and more inclusive and open regulatory frameworks allow them to grow. There are greater opportunities for established financial institutions to collaborate strategically with fintech start-ups now that they are being compelled to review their market and strategy decisions. The conversation should centre on how fintech trends are evolving, how fintech products are changing supply and value chains, and how national regulatory frameworks affect cross-border investment and innovation performance across markets. It ought to be logical and grounded in practice.

Need To Explore Rural Market for further growth
In India, the fintech industry is now primarily concentrated in urban areas. On the other hand, rural areas are where more than 65% of Indians live. In rural areas, just about 28% of people have smartphones with Internet connectivity. Additionally, the degree of financial awareness in these areas is shockingly low. The limitations severely impede the growth of fintech in some areas, but the data also show tremendous untapped potential.

Fintech company has to enter the rural market:

1.Means of communicating about your product to the people
There are several ways to communicate with your audience in an urban area. Emails, print and television commercials, social media, display hoardings, and other channels are all options.
These, however, won't work in a remote area. See why, will we?
- Social media, emails
- Television advertisements
- Advertising hoardings

2.Low purchasing power
People in rural areas have a low purchasing power. They, in general, prefer to buy in small quantities and more often.

Try to give offers on small purchases in rural areas by partnering with small general shops in rural area only not with big, branded companies because they buy mainly from local shops this will attract more customers

3. Reaching the last mile

Reaching every village in the nation and ensuring that your product is available when the customer is there is a completely different ballgame than simply sitting about in posh corporate offices and effectively communicating with your target audience in the villages of the country.

Small fairs typically take place around village festivals; try to sponsor them and ensure that all payments are made electronically. If necessary, try to assist them with payment instructions.

India has the presidency Of G20 for a year. It's time for India to show how advanced is their fintech industry and how it can revolutionise and bring changes in the world.

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GAP ANALYSIS BETWEEN PASSENGERS EXPECTATIONS AND PERCEPTIONS OF KMT KOLHAPUR SERVICE QUALITY USING SERVQUAL APPROACH

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ABSTRACT

A fundamental strategic concern for businesses operating in the service sector is the provision of optimal services that are personalized to the needs, wants, wishes, and preferences of clients. The fundamental focus of management in firms is to raise service quality standards because doing so will increase customer satisfaction, which will then result in sustained competitive advantage. Therefore, in order to survive, maintain their ability to compete, and carry out customer satisfaction procedures, service organizations should evaluate the quality of the services they provide to the customers in order to become aware of the needs of those customers and to propose strategies for improving and promoting their service quality. Various approaches have been brought out to assess service quality in service organizations. The SERVQUAL approach, which is now being employed, is based on a genuine understanding of the customer's perception of the service quality that was supplied in comparison to the ideal circumstance. In order to evaluate the quality of a service, it is crucial to analyze and compare service providers' opinions and determine whether they are consistent with consumers' opinions. The SERVQUAL model is utilized in the current study to identify the discrepancy between expectations and perceptions of the services offered by KMT Public Road Transport, and it makes an effort to suggest some ways to narrow the discrepancy. Using the SERVQUAL methodology, the 5 SERVQUAL dimensions of tangibility, empathy, assurance, reliability, and responsiveness were investigated among 388 customers. Results show that tangibility and reliability consumer expectations are not being met across all dimensions, and there is a large discrepancy between what customers perceive and what they expect.

Keywords: Service Quality, Service Gap analysis, SERVQUAL, Reliability, Assurance, Tangibility, Responsiveness and Empathy.

Introduction

Higher levels of customer satisfaction are correlated with higher levels of service quality. For commercial enterprises all across the world, service quality and customer happiness are rising concerns. Customer satisfaction is regarded as the most crucial component of a product or service in today's business environment. In the case of public transportation by road, service quality and customer satisfaction became deciding factors and helped customers form an impression of public transportation. This is a big possibility for the company to gain a competitive edge because of the growth of a solid relationship with its customers.

The transport landscape is increasingly evolving, and its future path is unknown. We know that mobility will increase as more people and goods travel around towns and across the globe: by 2030. Annual air traffic will reach 80 trillion air-kilometers – an increase of 50 percent compared to 2015; global freight volumes will increase by 70 percent relative to 2015. There will be an extra 1.2 billion cars on the road – twice the amount today. (Sustainable Mobility for All Initiative, 2017)

Service Quality

The performance, or profitability, of the service sector is thought to be significantly influenced by service quality. Service excellence both lures new clients away from rival businesses and encourages clients to make repeat purchases (Venetis & Ghauri, 2002; Wantara, 2015).

Conformance to client requirements is a common definition of service quality (Berry, 1988). Service quality is described as "a multidimensional term, judged and experienced by consumers, according to a set of key aspects, classified in five areas, namely: tangibility, reliability, responsiveness, assurance, and empathy" (Mauri, 2013). According to Rauch. (2015), the idea of service quality was first applied as a framework for marketing

techniques that put the client first. Due to its crucial connections to expenses, profitability, customer happiness, customer retention, and service guarantees, service quality has emerged as an essential research issue. The importance of service quality in company marketing and financial performance is likewise becoming more widely acknowledged.

Service Quality Gap
Gap 1: Customer expectation – management perception gap:
This discrepancy can arise when the service provider doesn't know or doesn't understand what customers are expecting. Service provider leaders fail to recognize which types of service can be expected to provide good quality service to customers. As a result, customers' service quality perceptions may be affected (Parasuraman , 1985:44).

Gap 2: Management perceptions – service quality specification gap:
As a result of resource constraints, market conditions, and lack of management commitment to service quality, the gap between management perceptions of customers' expectations and the actual specifications established for service that arise. The disparity may affect customers' perceptions of service quality (Siddiquei, 2018).

Gap 3: Service quality specifications – service delivery gap:
While Companies may have structured requirements or specifications for maintaining service quality, due to variation in employee efficiency, it may be difficult to conform to those requirements (Parasuraman , 1985:44).

Gap 4: Service delivery – external communications gap:
This discrepancy in the differences between service delivery and what the company promises through external communications and/ or lack of knowledge on service delivery aspects will influence the expectations of customers about service quality (Parasuraman, 1985:46).

Gap 5: Expected service – perceived service gap:
Gap 5, the most significant gap, can be regarded as a function of the first four gaps and Parasuraman. (1985:46) argue that the relationship between Gap 5 and the first four gaps is still there. The quality that a customer perceive in a service is a function of the magnitude and direction of the gap between expected service and perceived service (Parasuraman, 1985:46) (Mouwen, 2015).
The SERVQUAL methodology measures service quality during the evaluation process, and the difference between the customer's expectations and perceptions is then used to define and compute service quality.

Research Methodology:
The current study is both descriptive and diagnostic in character. A well-structured questionnaire was created to gauge the passengers' perceptions of and satisfaction with the KMT bus services to get the fullest possible first-hand information on the research problem. More efforts were made to determine gap analysis with respect to the quality of service of KMT with the help of the SERVQUAL model.

Measuring tool
The SERVQUAL model's determinants were used to create a well-structured questionnaire for the current investigation. The questionnaire that was used to gather information about how passengers felt about the KMT bus service included the five variables of tangibility, reliability, responsibility, assurance, and empathy. Then based on the pilot study, the questionnaire was modified and restructured for the survey. Structured questionnaire has been framed using determinants of SERVQUAL model.

Data Analysis:
With the use of suitable statistical methods, the acquired data has been processed. The statistical methods like percentage analysis, mean, Cronbach's Alpha, Measure of Sampling Adequacy, and to assess the relevance of various aspects of gauging the perception of the passengers.

Results:
The service quality gap is calculated as follows:

Service quality gap = Perception (experience) - Expectation
A perception of service above the expectation produces satisfaction, while the perception below the expected level makes dissatisfaction.

T	Tangible Attributes	Perception Mean (P)	Expectation Mean (E)	Service Quality gap (P-E)
T1	Bus Shelters neat and clean	2.91	4.01	-1.1
T2	The environment is clean and hygienic.	2.79	3.86	-1.07
T3	Proper Seating facilities in bus/bus stand	2.9	3.45	-0.55
T4	It is equipped with modern technology.	2.63	3.93	-1.3
T5	Bus time table.(Arrival and Departure)	2.87	3.64	-0.77
T6	Availability of seats.	3	3.6	-0.6
T7	Leg-space in buses.	3.32	3.99	-0.67
T8	Well cleaned, Buses.	3.04	3.97	-0.93
T9	Seats reserved for women/physically challenged persons and senior citizens.	3.38	3.7	-0.32
T10	Ceiling heights & Ambiance	3.49	3.91	-0.42
T11	Buses are well maintained.	3.06	3.62	-0.56
T12	The dress of the staff is neat and thoughtful.	3.38	3.79	-0.41
	Average Tangible Attributes	**3.07**	**3.79**	-0.72

Table: 5.1 : Tangibles SERVQUAL Scores:
Source: Primary Data Survey

Table 5.1 indicates customers are highly dissatisfied with the attributes mentioned in the Tangibles aspect. The average SERVQUAL score of 3.07 supports this statement. The total average gap score is (0.72) out of 12 features, three of the critical attributes of 'Bus shelters are clean and tidy (1.10), the hygienic atmosphere (1.07) and advanced technology (1.30) have earned the highest gap score. This means that in the 21st century, KMT needs to change and focus on sanitation, adaptation to new technologies, and cleanliness to draw more passengers to public transport.

R	Reliability Attributes	Perception Mean (P)	Expectation Mean (E)	Service quality gap (P-E)
R1	The timetable is error-free.	3.07	3.80	-0.73
R2	(Punctuality).	2.99	3.86	-0.87
R3	Reach the destination on time.	3.04	3.85	-0.81
R4	Rarely breaks down	3.17	3.77	-0.60
R5	Easily book a ticket	3.39	3.85	-0.46
R6	Seats reserved for women/physically challenged persons, senior citizens are occupied by the deserving passenger.	3.12	3.88	-0.76
	Average Reliability Attributes	**3.13**	**3.84**	**-0.71**

Table 5.2 Average Reliability SERVQUAL Scores
Source: Primary Data Survey

According to the customer's response (table 5.2), passengers believe that KMT provides its customers' buses with convenient routes and timely facilities and recognizes their basic needs. However, the average gap score is (0.71) out of the six attributes reliability attributes 'ticket booking program' received the lowest gap score (0.46) and Punctuality (On-Time Service) earned the gap score (0.87). This suggests that KMT has to focus on this to satisfy customers.

Re	Responsiveness Attributes	Perception Mean (P)	Expectation Mean (E)	Service quality gap (P-E)
Re 1	Inform people about the timetable change (arrival and departure) in advance.	2.89	3.78	-0.89
Re 2	Inform people about the change in prices in advance.	3.09	3.69	-0.60
Re 3	Timely and efficient service.	3.19	3.85	-0.66
Re 4	Satisfy passenger's requests right the first time.	3.22	3.64	-0.42
Re 5	The staff is always willing to help passengers.	3.33	3.81	-0.48
Re 6	Prompt and accurately responsive to passengers.	3.22	3.82	-0.60
Re 7	Clarity of announcement (audible)	3.20	3.80	-0.60
Re 8	Announcement inside the bus is effective & guide the passengers.	3.22	3.82	-0.60
	Average Responsiveness Attributes	**3.17**	**3.78**	**-0.61**

Table 5.3 Responsiveness SERVQUAL Scores:

Source: Primary Data Survey

The study reveals that table (5.3) staff are eager to support customers but cannot deliver timely services when the situation demands. These points shape the average SERVQUAL score under the Responsiveness dimension to 3.17, indicating dissatisfaction in this field. The average Gap score is (0.61) out of the eight sensitive attributes that 'satisfied passengers first-order' has earned the lowest gap sore (0.42), and 'bus arrival and departure time shift details' has the highest gap score (0.89). This means that KMT will have to concentrate on using proper communication channels to inform the passenger's changes in the timetable for some reason.

A	Assurance Attributes	Perception Mean (P)	Expectation Mean (E)	Service quality gap (P-E)
A1	The travel fares are reasonable.	3.47	3.85	-0.38
A2	short travel time	3.19	3.73	-0.54
A3	KMT bus drivers operate the buses safely.	3.34	3.99	-0.65
A4	Safe in their transactions with staff in the bus/bus stand	3.35	3.88	-0.53
A5	In-depth occupational knowledge of their jobs.	3.36	3.83	-0.47

A6	The staff of KMT instills confidence in the Passengers.	3.29	3.78	-0.49
A7	KMT runs a sufficient number of buses in the city	3.16	3.79	-0.63
A8	KMT gives priority to passenger safety.	3.30	3.86	-0.56
A9	Not afraid of being pick-pocketed on the bus.	3.14	3.68	-0.54
	Average Assurance Attributes	**3.29**	**3.82**	**-0.53**

Table 5.4: **Assurance Attributes SERVQUAL score**
Source: Primary Data Survey

From the customer's point of view (Table 5.4), KMT is close to instilling trust in the Assurance aspect of attributes. Passengers believe that KMT maintains a safe ride and is consistent in delivering quality services. Yet overall Gap Score (0.53) out of the nine insurance attributes, 'Travel rate is fair' has the lowest gap score (0.38), which means passengers are satisfied with the current KMT ticket price. Nonetheless, 'KMT drivers run the bus safely' obtained the highest gap score (0.65). That means that KMT must concentrate on this part of the service as customers' demands are rising, and they are getting expected service from the KMT.

Em	Empathy Attributes	Perception Mean (P)	Expectation Mean (E)	Service quality gap (P-E)
Em1	KMT always looks after the best interests of their passengers.	3.18	3.68	-0.50
Em2	KMT operating hours are convenient to all their customers.	3.23	3.71	-0.48
Em3	Getting information about the facilities and services of bus companies is easy.	3.19	3.67	-0.48
Em4	It is easy to find and access the bus stand.	3.47	3.74	-0.27
Em5	Bus drivers and conductor shows courtesy to the passengers	3.36	3.72	-0.36
Em6	Bus drivers and conductors are willing to help passengers.	3.41	3.8	-0.39
	Empathy attributes	**3.31**	**3.72**	**-0.41**

Table 5.5: Empathy Attributes SERVQUAL Scores:
Source: Primary Data source

The findings of the survey indicate (Table 5.5) that consumers are still not entirely pleased. KMT will also strive to concentrate on the best interests of its customers to reach a higher level of customer satisfaction. Overall Gap score for empathic attributes is (0.41) from which 'easy to find a bus stop' has earned the lowest score for the difference (0.27) and 'KMT looks after the needs of the travelers' has the highest score for the distance. That means that this Empathy Attribute will be more concentrated on enhancing the efficiency of the service.

Hypothesis Testing:

H0:There is no significant gap between Passengers' expectations and Satisfaction for KMT services.

H1:There is a significant gap between Passengers' expectations and Satisfaction for KMT services.

To test the hypothesis Paired Sample t-test is used. Descriptive Statistics results are as follows.

Paired Samples Statistics		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	**Tangibles Expectations**	3.7685	388	.92223	.04682
	Tangibles Satisfactions	3.0483	388	.82618	.04194
Pair 2	**Reliability Expectations**	3.8170	388	1.13660	.05770
	Reliability Satisfactions	3.1151	388	.89928	.04565
Pair 3	**Responsiveness Expectations**	3.7529	388	1.01086	.05132
	Responsiveness Satisfactions	3.1511	388	.91574	.04649
Pair 4	**Assurance Expectations**	3.7938	388	.97939	.04972
	Assurance Satisfactions	3.2784	388	.87070	.04420
Pair 5	**Empathy Expectations**	3.6916	388	1.00834	.05119
	Empathy Satisfactions	3.2977	388	.90177	.04578

Table:5.6: Paired samples statistics:

Paired Samples t test		Paired Differences			95% Confidence Interval of the Difference		t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	Lower	Upper			
Pair 1	**Tangibles Expectations - Tangibles Satisfactions**	.72015	.99257	.05039	.62107	.81922	14.291	387	.000
Pair 2	**Reliability Expectations - Reliability Satisfactions**	.70189	1.21002	.06143	.58111	.82267	11.426	387	.000
Pair 3	**Responsiveness Expectations - Responsiveness Satisfactions**	.60180	1.10647	.05617	.49136	.71225	10.714	387	.000

Pai r 4	**Assurance Expectations - Assurance Satisfactions**	.51546	1.04258	.05293	.41140	.61953	9.739	387	.000
Pai r 5	**Empathy Expectations - Empathy Satisfactions**	.39390	1.06607	.05412	.28749	.50031	7.278	387	.000

Table 5.7: Paired samples test: Source: Primary Data Source
Table 5.6 and table 5.7 indicates that

Tangibility: The test statistics value is 14.291, and P-value is 0.000. The P-value is lesser than 0.05 (0.000<0.05), the null hypothesis is rejected at a 5% level of significance. It is therefore concluded that there is a significant gap between Passenger expectations and satisfaction for KMT services.

Reliability: The test statistics value is 11.42, and P-value is 0.000. The P-value is lesser than 0.05 (0.000<0.05), the null hypothesis is rejected and at a 5% level of significance. It is therefore concluded that there is a significant gap between Passenger expectations and satisfaction for KMT services.

Responsiveness: The test statistics value is 10.714, and P-value is 0.000. The P-value is lesser than 0.05 (0.000<0.05), the null hypothesis is rejected and at a 5% level of significance. It is therefore concluded that there is a significant gap between Passenger expectations and satisfaction for KMT services.

Assurance: The test statistics value is 9.739 and P-value is 0.000. The P-value is lesser than 0.05 (0.000<0.05), the null hypothesis is rejected and at a 5% level of significance. It is therefore concluded that there is a significant gap between Passenger expectations and satisfaction for KMT services.

Empathy: The test statistics value is 7.278and P-value is 0.000. The P-value is lesser than 0.05 (0.000<0.05), the null hypothesis is rejected and at a 5% level of significance. It is therefore concluded that there is a significant gap between Passenger expectations and satisfaction for KMT services.

For all the above five parameters, it indicates that there is a significant gap between Passengers' expectations and passenger's satisfaction with reference to the Kolhapur Municipal Transport.

Hypothesis	Variables	H0: Accept or Reject	Decision	Statistical Tool Used
There is no significant gap between Passengers' expectations and Satisfaction for KMT services.	Tangibility	Rejected	Relationship	Paired Sample t- test
	Reliability	Rejected	Relationship	
	Empathy	Rejected	Relationship	
	Assurance	Rejected	Relationship	
	Responsiveness	Rejected	Relationship	

Table 5.8 summary of the Hypothesis testing

From the above summary table it can be concluded that there is a significant difference between customer service expected and the actual service perceived. To bridge the gap between expectation and perception of the customer Kolhapur Municipal Transport Management need to work out different marketing and promotional strategies.

Gaps and recommend strategies for service quality improvement.

Gaps	Strategies
● There is significant gap between Passengers' expectations and Satisfaction for KMT services in terms of tangibility attributes	✓ Clean and hygiene at bus stops and on board. ✓ The bus station premises and the buses have to be equipped with modern technology. ✓ Drinking water facility, washrooms and other recreational facilities at bus stops. ✓ Regular maintenance of the buses and bus stops.
● There is significant gap between Passengers' expectations and Satisfaction for KMT services in terms of reliability attributes	✓ Punctuality is required to maintain service quality. ✓ Frequency of the buses.
● There is significant gap between Passengers' expectations and Satisfaction for KMT services in terms of responsiveness attributes	✓ Proper Communication Skill and public relations. ✓ Listen to the voice of the customer. ✓ Well trained and dedicated staff. Training should be given after regular intervals.
● There is significant gap between Passengers' expectations and Satisfaction for KMT services in terms of assurance attributes	✓ Priority to Safety and Security. ✓ Customer preference. ✓ Understanding customer ✓ Quick and prompt service.
● There is significant gap between Passengers' expectations and Satisfaction for KMT services in terms of empathy attributes	✓ Following up to customer complaints. ✓ CRM needs to be implemented. ✓ Conductors and drivers need to give proper training with respect to how to deal with passengers and how to solve their queries.

Table 6.1 : Gaps and recommend strategies for service quality improvement

Conclusion:
The objective of this research is to assess how customers perceive Kolhapur Municipal Transport's (KMT) level of service with regard to Kolhapur. It has been determined that Kolhapur Municipal Transport (KMT) customers have the highest expectations in terms of reliability, which includes punctuality, on-time arrival, and minimal breakdowns, as well as acceptable fleet or bus condition. Additionally, it includes the lowest expectation in terms of the empathy dimension, which consists of the behavior and helpfulness of the crew on board, easy access to information, and convenient bus timetable. It also involves technological intervention in the ticket purchasing system.

The tangibility dimension, which includes the quality and ambiance of the bus stops, the hygienic environment and amenities at the bus stops, the legroom and comfort of the seating on the board, has the highest quality gap. The quality's empathy component has the smallest gap.

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GO TO MARKET STRATEGY: AN IMPORTANT PHASE FOR STARTUPS

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ABSTRACT
When you're trying to launch a brand-new product into the market, this is mostly true. When resources are few, competition is fierce, and deadlines are looming, you need something to lean on and serve as a reminder that you are on the right track. The last thing you want to do when launching a new product is to do it without the proper go-to-market strategy structure. Without proper planning, it is impossible to tell if you are pursuing the wrong audience, entering a market too early or too late, or concentrating on one that is oversaturated with similar solutions and you do not need to take the risk of losing time and assets on the introduction of an unsuccessful product. One of the best methods to do it is through what is known as a go-to-market plan. This study goes above and beyond simple repetition. It serves as a guide to assist you in introducing a new product, updating your brand, or selecting a different target market. The goal of this study is to define the go-to-market strategy for start-up companies. Researchers will discuss what a go-to-market strategy is, why startups need one, and how to create one.
Keywords: Startups, Market Strategy

Introduction

It's safe to mention that each business wants to expand. While growth might originate from a variety of places, all of them have one thing in common: Absent a robust if you do not have a strategy, you'll waste lots of your time trying to accomplish nothing anyplace. Statistics show that 90% of recent businesses fail. Approximately 21.5% of companies fail. 30% of companies fail within the primary year of operation; within the second 50% of companies barely last 5 years before they fail. Recently, the IBM Institute for Business Value and Oxford Economics collaborated to undertake a poll. A main finding of the study was that the failure of an Indian startup is primarily because of the absence of trailblazing innovation. Although India contains a strong entrepreneurial culture, up to 90% of latest businesses fail during the primary five years, as was previously said. Around 1,300 Indian executives participated within the study, including 600 startup business owners, 100 venture capitalists, 100 administration, 500 executives from well-established corporations, and 22 administrators from educational institutions.

Who cares if you have got the most effective product within the world if nobody is awake to it? Your ability to sell your IT product effectively, your ability to achieve your intended audience, and the way you allocate your advertising budget will all have a major impact on how profitable it's. It's even harder for startups. They must figure even harder on their marketing because they're still relatively unknown. They even have a modest to nonexistent marketing team and a constrained budget. Unfortunately, web and mobile developers rarely understand marketing and won't facilitate your go-to-market strategy without first conducting some research.

Literature review:

Ashkenas (2016) says that if you are a startup or a young business that needs to quicken revenue growth, Think about how this strategy might work for you. Identify a small quantity to begin with. If you are a B2B player, of extremely specific consumers, either companies or desired consumer groups (such as urban professionals with traits). After that, put yourself in their position by considering their problems and speaking to them about their problems rather than your goods. For instance, Steve Blank, a startup specialist, advises that you do a "customer development" process that involves speaking with dozens of potential customers. Following these actions, you can start experimenting with a go-to-market strategy with the intention of further refining and altering it in light of experience and new information. One of the hardest tasks for a company to complete is determining a strategy for entering the market. However, it's nearly hard to succeed without comprehending the client's problems.

The cornerstones of this structure, which will put you far ahead of your competitors, are picking the proper market and truly comprehending your clients. It is crucial to be adaptable, have the proper presumptions, maintain the humility to regularly verify them, and make the required adjustments if they turn out to no longer

be true. This may seem like a lot of research to do before beginning work, but it will make everything else much easier to follow: The adage "If you don't plan, you plan to fail" is incredibly accurate.

No matter if you're creating toothpaste, jet engines, or everything in between, they came to the same conclusion. With the proper team structure and alignment, any product can be purchased or sold. What are we building, and for whom? is the most important issue that this framework rolls up to. It goes to the essence of establishing great organizations. For a go-to-market strategy to be effective, these questions must be raised and addressed. Of course, no strategy will ensure success, but as the compass needle moves, this one will guide your business in the proper direction. And it in itself gives you a competitive advantage (García-Gutiérrez & Borreguero, 2016).

According to Christina Wallace of the Arthur Rock Center for Entrepreneurship at HBS, for early-stage businesses, success involves more than just creating an original product and obtaining funding; it also entails successfully entering the market to raise awareness of your new product and convince the customers to buy it. Good go-to-market plans are built on an awareness of the target market's demographic, the issue you are trying to solve for them, and their path through the buying process. The founders' decision-making regarding sales, marketing, and resource allocation will be aided by this insight. (Anaza, Rutherford, Wu, & Bhattarai, 2023).

Understanding the market, user pain points, and effective target audience communication are the foundation of a solid GTM strategy. You may detect and confirm any problems, wants, and preferences through this approach with real users. All successful GTM planning is built on a foundation of customer empathy (Kehbila, (2020).

Objectives of the Study
1. To study the Startup Stages towards the successful execution
2. To Study the Go-to- Market strategy in startups

Research Methodology
The study is based on the review of literature and the interaction with the startup's promoters of IT service startups in Pune.

Analysis of Research
What is the GTM strategy?
A company's go-to-market (GTM) strategy outlines how it'll interact with customers so as to persuade them to buy its goods or services and to realize a competitive edge. The buying journey, new product or service releases, product rebranding, or entry to a new market are all topics covered by a GTM strategy. Go-to-market strategy, or GTM strategy, is precisely what it sounds like: an approach to entering the market. It should be about the introduction of latest products, reaching intent on new markets, or simply announcing new features. To achieve their target market and persuade people to buy the new product, businesses establish their distribution and sales strategies. The four essential components of a go-to-market strategy are as follows:
Product-market fit (PMF): What issue(s) are resolved by your product?

Target audience: Whose problem is being solved by your product, and who are they? How much are they prepared to spend on a fix? What are the annoyances and pain points you'll be able to resolve?

Demand and competition: Who is already providing what you're launching? Exists a marketplace for the goods, or is it already saturated?

Distribution: What distribution channels will you utilize to plug your goods or service.

How to build a go-to-market strategy?
•Determine the personalities and therefore the buying center.
•Create a worth matrix to help with messaging identification.
•Have a message test.
•Before rolling them out widely, optimize your adverts to support the findings of your tests.
•Recognize the buying cycle
•Select from the subsequent four common sales strategies.
•Utilize inbound and/or outbound strategies to extend brand recognition and demand generation.
•To come up with incoming leads, create content.
•Find techniques to spice up conversion rates and streamline your pipeline.
•Analyze the sales cycle and make it shorter.
•Lower the worth of customer acquisition.

•Plan the way to reach your current clientele.

A tactical action plan called a "go to market strategy" explains the activities that must be taken in order to be successful in a new market or with a new customer. It may be used for pretty much anything, including the introduction of new goods and services, the relaunch of your business or brand, or even the expansion of an existing product into a new market.

Need and significance of GTM

A strong GTM strategy often involves target audience identification, a marketing plan, and a sales strategy. It is a detailed plan which is made to introduce a product to the market.

Every year, there are more start-ups than ever before, but there are also more start-up failures; 90% of start-ups fail, frequently in the first year. 20% of projects fail before the end of the first year, 30% before the end of the second year, 50% before the end of the fifth year, and 70% before the end of the tenth year. Building a go-to-market strategy is crucial to lower this number of failures.

The most frequent causes of failures are 2% legal issues, 2% operations issues, 2% technology issues, 6% tech problems, 16% finance issues, 34% a lack of product market fit, 22% marketing issues, and 18% team issues. To lower the frequency of, the appropriate research is needed.

Statistics show that 90% of new businesses fail. Twenty-one percent of businesses fail in the first year of operation, thirty percent fail in the second year, and fifty percent survive for only five years.

Rates of Startup Failure in 2022:
- 90% of new businesses fail.
- 75% of startups with venture capital funding fail.
- Only 50% of companies survive into their fifth year.
- 33% of startups survive for ten years.
- Only 40% of new businesses truly make money.
- Cash flow issues account for 82% of company failures.

The information industry has the greatest failure rate (63%). The main causes of startup failures are identified by venture investors (IBM 2016)
- 77% of business models aren't unique.
- 70% lack of adequate skills
- 65% insufficient resources
- Insufficient leadership mentoring for startups 64%
- Startups engage in unethical commercial practices 64%
- Leadership without experience 53%

The main cause of startup failure is a lack of market demand. (Source: \sFailory.com)
- One of the main causes of failure is poor marketing.
- Startup failure can be attributed to team issues.

A common trait of unsuccessful firms is that the CEOs and directors have little experience.
Most unsuccessful startups typically have certain characteristics:
- First, a lack of forethought and emotional pricing can emerge from a lack of competency.
- Second, novice entrepreneurs frequently make poor judgments or purchase incorrect merchandise.
- Third, bad advice from friends and family, on top of family obligations, adds to the already high stress of having your own business and affects how many new businesses fail.
- Even when you devote a lot of time, energy, money, and resources to
- When creating a new good or service, a bad go-to-market plan could make your startup fail.
- Making a go-to-market strategy minimizes errors and failures and provides concise tips on how to differentiate your startup from the competition and using the right strategies to succeed.

Many errors and oversights that might ruin the launch of a new product can be avoided by developing a go-to-market strategy. Even if the product is well-designed and unique, a launch might be hampered by poor product-market fit and oversaturation. A go-to-market strategy can help you manage expectations and iron out any wrinkles before you invest in bringing a product to market, even while it can't ensure success. As a startup, you carefully organize your resources to lower risks.

Resources include the expenses, labor hours, and personnel required to build and sustain your product. You might get assistance from a GTM strategy, which acts as an action plan for the launch of a new product. It guarantees that the service addresses the user's problems and has a suitable distribution plan.

Using my experience in the startup industry, it is created a GTM plan for the ecosystem, startup marketing is a development of traditional marketing, but it is a separate and largely disorganized topic. Although understanding the basics of marketing is essential, it doesn't hurt to add to and enhance the current body of information to keep marketing current. This fits the bill noticed a gap that made me reconsider what we should be doing as startup marketers and entrepreneurs.

The majority of people who have heard of startups are aware of how crucial market validation is to their success. According to me, at the startup level, the question of whether the customer wants the product is more important than what the consumer wants from the product. Finding out if the consumer wants what we are delivering right now is more important than developing a detailed plan for the product's features, feel and design, or even its name. Where the 4Ps' applicability in this age is in doubt is about startup marketing.

Principal Justifications for Go-To-Market Strategies in Startups

You must invest some time in research, planning, and other time-consuming procedures to create a solid go-to-market strategy framework.

For your startup, there are several key reasons to develop a go-to-market strategy:

- Ensure Quicker Profit

In startups, results are vitally crucial. The sooner you can demonstrate that your plan is effective and generates income, the better. GTM strategy enables you to launch your product, attract attention from the market, and generate first sales much more quickly. It will be less frightening and exhausting to make decisions on the fly since you will have a well-thought-out plan in place.

- Limit Potential Hazards

Startups already face too many risks; avoiding them completely and suffering a marketing failure would be wasteful. Business strategists will cry when they see the disorganized distribution attempts and the money spent on poor advertising.

- Learn Every Detail about Your Company and Product

The GTM strategy development is the ideal opportunity to genuinely think about your product whether you have never created a business plan or if it was hastily made to soothe investors. You will determine the product's distinctive features, your target market, and how to reach them.

- Make Investors More Sure

If you have everything planned in advance and your idea goes beyond the creation, you are more likely to attract investors. Funding consultants will probably ask you to prepare a GTM anyways since the questions about distribution often come up during pitches.

- Gain a Competitive Advantage

Not many startups dedicate time and resources to developing a detailed go-to-market strategy. So, by creating one for your business, you would be able to stand out among your competitors. During the GTM strategy creation, it is of crucial importance to profoundly analyze the market and your competitors to discover their strong and weak points.

Conclusion:

When you have a go-to market strategy that you know is effective and will work every time, then you're guaranteed that your company and product is on its path to growth and success. There is no need for you to waste your time thinking about whether your strategy will work or not. You do not have to worry if it will cost you too much because you know that it works, and it always will as long as you tweak it to your target consumers' needs. The bottom line is that having a GTM is an essential part of any successful business. So, ensure that you take your time creating a great go-to strategy, and you take experts' advice.

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IMPACT OF OUTDOOR HOARDING ADVERTISEMENTS ON CONSUMER BUYING BEHAVIOUR

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ABSTRACT
The article studies the impact of outdoor hoardings advertisements on Consumer buying Behaviour. The study was conducted on 200 consumers from Pune City, Maharashtra, India. The data was collected through a questionnaire method where respondents were asked to give their opinion about various hoardings in different areas and the advertisements that are being seen on them. The main objective of the study was to find the impact of hoardings on consumer's buying behaviour. For the purpose of this study a quantitative research design was used wherein the researcher used a questionnaire to gather the data from the respondents. Results show that most of the respondents prefer a hoarding with clear message than a hoarding with mixed up message. People also prefer advertisements carried out by the private sector rather than local government authorities.
Keywords: Hoarding, Consumer buying behaviour, Signage.

Introduction
Background
Outdoor advertisements have been the oldest form of advertisement. Till date, it is one of the most effective means of media to achieve a strategic communication objective without spending much money. In the initial times, the urban areas were good places for advertising. Gradually, hoardings also penetrated into rural areas and became useful in communicating with a large number of people. It is estimated that every year in India nearly four lakh hoardings are being put up only in Mumbai city which indicates hoarding's importance as an advertising medium.

Outdoor advertisements have been quite essential as they can reach a large number of people. They also help in disseminating information via hoardings which cannot be done by any other forms of advertising. It is possible to deliver the required message to a maximum number of people at one place. Outdoor hoardings are effective in advertising various products and services. However, there are several problems associated with outdoor hoardings as well, such as environmental pollution, illegal hoarding and hoarding without permit from concerned authorities etc.

Needless to say, the problem of advertising on hoardings has been one of the prime issues among the politicians, civil society and common people alike. Even with all such problems associated with hoardings it is difficult to imagine a city without hoarding in India. It is a fact that hoardings are an efficient means to spread a message across masses at one place. However, this study has tried to find out the impact of outdoor advertisements on consumer's buying behaviour. In this study, the researcher intends to find out the impact of hoardings on consumer's buying behaviour.

Importance of Outdoor advertisements
Outdoor advertisements, like billboards, have a major role to play in the promotion of products and services. With outdoor advertisements, businesses can reach out to potential customers in a more cost-effective manner than other forms of advertising. Outdoor advertisements are also highly visible to passing traffic and pedestrians which helps them spread their message more effectively. Furthermore, outdoor advertisements can be used to draw attention to special events, increase brand awareness and boost sales. In addition, they offer a great way to build recognition of a business or product over time by displaying the same ad in different locations. A well-designed outdoor advertisement can also help establish an emotional connection with the target audience, creating an instant impression that can lead to brand loyalty. Outdoor advertisers can use creative techniques like 3-D displays and graphics to create a visual impact that captivates consumers and encourages them to think about the product or service being advertised. As such, outdoor advertisements are an important tool for businesses who want to increase their visibility and gain recognition from potential customers. The following are the reasons as to why outdoor advertising is important:

1.   It helps to create brand awareness: Outdoor advertisements are an effective way to create brand awareness, as they are visible to passing traffic and pedestrians. These advertisements can be used for a variety of purposes such as announcing special events, increasing sales of products or services, and creating brand recognition over time. It is cost-effective: Outdoor advertising is one of the most cost-effective forms of advertising available today. The cost of outdoor ads is much less than that of other forms of advertising and the results can be seen almost immediately. It allows businesses to target their desired market: Outdoor advertisements allow businesses to target their desired market more accurately. Businesses can choose where they want to place their ads to reach their desired demographic.

2.   It is highly visible: Unlike other forms of advertising, outdoor advertisements are highly visible to passing traffic and pedestrians. This gives businesses an opportunity to instantly raise their brand awareness and spread their message within a short period of time. It helps businesses reach out to customers while they are shopping: Outdoor ads provide businesses with a cost-effective way of reaching out to customers while they are shopping. This helps businesses capture the attention of customers who may not have seen their products or services otherwise or have not thought much about them yet.

3.   They offer an opportunity to build recognition over time: Many outdoor ads can be used for a long duration as these ads generally get replaced gradually over time, hence providing businesses with an opportunity to build recognition over time.

4.   It is a great way to build recognition over time: Outdoor advertisements are a great way to build brand or product awareness over time. The same advertisement can be placed in different locations, allowing the ad to be seen by more people, thereby increasing its effectiveness.

5.   Effective in creating an emotional connection with the target audience: A well-designed outdoor advertisement can help create an emotional connection with the target audience and focus their attention on the products or services being advertised. Outdoor advertisers use creative techniques like 3-D displays and graphics to create a visual impact that captivates consumers and encourages them to think about the product or service being advertised.

6.   It helps establish a brand's reputation: A reputation is the lasting memory that people have of a business or product. This can be created through outdoor advertising as it can help establish brand awareness and make consumers aware of how a business or product works, what they do and why they are popular.

7.   It appeals to the younger generation: Studies show that people in this age group are more likely to walk around, stare at cell phones and stop to read anything on the street. Outdoor advertising is an effective way for businesses to be seen on such young minds by letting them know about their brands and products effectively.

8.   It is worth investing in: Outdoor advertisements can be a great way to invest money into the business. When a consumer is shown an advertisement, they are more likely to notice the ad, think about the product and decide whether it is worth buying or not.

9.   It helps raise brand awareness: When advertising outdoor advertisements, businesses can determine whether their ad has been effective and decide whether they should invest further in outdoor ads or not if it has been successful in attracting potential customers.

10.   It leads to increased sales of products and services: The success of a business is directly related to their level of brand awareness that consumers have of their products and services. This is since customers are more likely to buy a product or service they have seen advertised.

11.   Businesses can use outdoor advertisements to advertise special events: Outdoor advertising allows businesses to announce special events, such as product launches and other marketing campaigns, without being required to pay for expensive media slots or buying tickets for large audiences.

12.   It helps improve the reputation of a business: Outdoor advertisements can be used by businesses to improve their reputation. This is because there is the opportunity for consumers to inform themselves about a brand by reading informative text on an advertisement and this gives them an opportunity to build positive customer relationships with the brand.

13.   It serves as a great awareness tool: Outdoor advertisements can be used to raise awareness of certain issues facing society, such as anti-smoking campaigns. They are also used to promote community events, such as festivals or cultural celebrations.

14.   It helps businesses highlight special offers: Outdoor advertisements can be used by businesses to display special offers for their products or services and help them acquire new customers.

15.   It is a cost-effective way of marketing: As outdoor advertisements are effective in instantly raising brand awareness, they are one of the most cost-effective forms of advertising available today.

However, there are also some limitations to outdoor advertisements that are done though hoardings:

1.   It can be tough to measure the success of an ad: While a well-designed outdoor advertisement can raise brand awareness and lead to increased sales, it can be hard to measure how effective the ad was in doing so.

2.   It is expensive: Outdoor advertising costs money. For businesses to get the most value out of their ads it may be necessary for them to place their ads in multiple locations. This is due to the fact that outdoor advertisements are only effective if consumers see them multiple times and therefore this requires multiple outdoor advertisements placed throughout different cities and towns.

3.   It can be tough to measure the impact of an ad: Outdoor advertisements are often placed in high-traffic areas, like busy streets. However, it can be difficult for businesses to determine the exact impact of their ad or how many people saw their advertisement.

4.   It may not always be necessary: If a business is only seeking customer feedback, does not have a significant product range and does not have a lot of competition then outdoor advertisements may not be needed as there are other more effective ways to advertise available.

5.   It disturbs the environment: Most countries have laws regarding the use of outdoor advertisements, so it can be difficult for a business to remove an advertising poster if it does not comply with regulations. In addition, advertising can distract pedestrians, which is especially important for blind or distracted pedestrians.

6.   It may not always be effective: Outdoor advertisements are only effective when the target audience sees them and remembers the brand and the advertisement that they saw. However, they are limited by where they can be placed and how many times they can be displayed.

7.   It has lesser reach than other types of advertising: Outdoor advertisements will not reach as many people as other forms of advertising like radio or television ads because they are limited to a specific location and time. In addition, most people will not visit a business just because it has an ad on the street.

8.   It does not always have a direct impact: Outdoor advertisements are often used to target a specific audience for a specific product or service, but this may not always be the case. In the United Kingdom, for example, there are many brands that specifically target bus users and their advertising is very effective in reaching this specific audience.

9.   It can be difficult to change: Unfortunately, most outdoor advertisements will be located on walls or other permanent structures so they cannot be replaced easily if they are removed. This can be very costly for businesses because they must replace their ad or have it removed.

10.   It can be tough to find the right location: Outdoor advertisements do not have much flexibility in terms of placement and so it is important that a business invests in advertising in a location where they know their target audience will see it.

Literature review
There are some research papers in the literature about the topic. Bora (2018) has mentioned that a hoarding, usually known as 'ambient media' is any large advertisement placed on the outside of a building or other structure. Outdoor advertising is the advertising of products or services in public via posters, signs, displays, and other forms of publicity outside the business establishment where they are sold or consumed. In India there are many types of hoardings such as light boxes i.e. poster boxes, sandwich boards, roller boards etc.

Shah (2021) stated that outdoor advertising is one of the most widely used forms of advertising and is used by many companies all over the world. Its effectiveness is evident in that it has been adopted all over the world. For example, a study conducted on the use of hoardings in Pune revealed that out of 1000 hoardings, 825 were illegal and 23 are government owned (Shah, 2012).

Kulkarni (2022) in his study on the tactics of hoarding noticed that most of the hoardings are used for obvious and general information, making them ineffective for advertising specific products or services. It is only possible to advertise products or services by incorporating them in the hoardings.

Yadav (2022) in his study on hoarding stated that most of the hoardings are not very effective in creating awareness about specific products or services. Thus, it was found that outdoor advertising was not a very effective method regarding providing customers with specific information about their products and services. In addition to these, he also noticed some other problems such as "lack of professionalism", "misuse of space" and "diminishing returns".

Shreenath (2019) in his study on hoarding concluded that outdoor advertising should be used with caution, as it can have a negative impact on the environment. He also suggested several ways of making hoardings more effective such as using interactive technologies like LED displays, providing detailed information about products and services, and utilizing other innovative techniques to make them more attractive. Overall, it can be concluded that outdoor advertising is an effective way of marketing products or services, but only when used with caution and appropriate techniques. It should also be noted that hoardings can be a powerful medium to create awareness about products or services and attract customers. Thus, companies should take advantage of these opportunities for their business success.

Lele (2018) in her study on hoarding concluded that the use of hoardings is still a major form of advertising in India. Although it has its drawbacks, the many advantages and effectiveness, make it an ideal tool for marketing products or services. Therefore, companies should carefully consider their options when selecting which type of advertisement to use. In order to maximize the potential of outdoor advertising, companies should invest in creative and innovative tactics that can help them reach their goals. With the right strategies and techniques, outdoor advertising can be a powerful tool for businesses.

Pathan & Mirza (2016)   in their study concluded that hoardings have become a part of the everyday life of people in India. Although it has its advantages, there are certain challenges to be aware of while using hoardings as an advertising tool. They suggested that companies should invest more in research and development to create innovative strategies to make their advertisement campaigns more effective. Additionally, they also suggested using interactive technologies like LED displays, providing detailed information about products and services, and utilizing other innovative techniques to make them more attractive. In conclusion, outdoor advertising is an effective way of creating awareness about products or services and attracting customers. Companies should invest in creative and innovative tactics that can help them reach their goals.

Woodland (2016) in her study concluded that hoardings are one of the most cost-effective and popular ways to advertise. The use of mobile or digital tools along with hoardings can further increase its effectiveness. Companies should take advantage of new technologies and create innovative strategies to make their advertising campaigns more effective. Additionally, they should also focus on targeting specific audiences with their advertisements, providing detailed information about their products and services, and utilizing other innovative techniques to make them more attractive. In conclusion, hoardings are a powerful way of advertising that can help companies reach their goals when used properly with the right strategies and techniques. Companies should invest in research and development to create innovative tactics to maximize the potential of outdoor advertising and avoid the risk of reaching a point of diminishing returns.

Kumar (2017) noted that in India, hoarding is the best medium because it can be seen by all people of a community. However, due to its effectiveness as a medium, hoardings have also faced environmental problems. According to Robinson (2012), hoardings have become an unwelcome feature of the Indian urban scene due to their visual pollution and are the cause of traffic problems in cities. Bora (2018) also notes that hoarding has become a headache for many city development authorities as it affects the aesthetics and beauty of cities negatively; it also causes immense problems like congestion, traffic jams and safety issues for pedestrians.

Shinde (2017) has suggested that there are various types of hoardings in India i.e., light box, sandwich board, roller board etc. which are used by the companies for advertisement purposes. Outdoor advertising is a large, text-based advertisement carried out on billboards, posters and other structures. Outdoor advertising is easily

identifiable and with the help of this advertising people can easily reach the required information. Outdoor advertising is one of the most common types of media which has spread across the world.

Another study found that advertisement was an important tool used by companies to promote their brand or products and services among masses. Marathe. (2019) in his study has said that the effect of outdoor advertising on consumers is mixed. If it is done properly, it can play a significant role in branding the company, but if done improperly then it can cause more harm to the company rather than good. He also said that there are certain factors which help in deciding an effective outdoor commercial campaign. Marketing research on outdoor advertising has proved that outdoor advertisement can be used effectively across many sectors and in various markets.

Shravan (2017) has mentioned that there are many problems which accompany indoor as well as outdoor public spaces as they both comprise human activities, activities which require human interaction and perception by humans. Outdoor hoardings have become a common sight in today's world. The use of outdoor and indoor advertising has also increased due to the growing population of the country.

Kotkar (2017) has also mentioned that the main intention of outdoor advertising is to help companies build their brand equity and increase the sales of products and services. Outdoor advertising is used by many companies all over the world and its effectiveness is evident in that it has been adopted all over the world.

Using a sample survey design, Aneja (2012) investigated outdoor advertisements at five different places for a period of six months. The results of the study showed that there was a high degree of cross media effects, wherein advertising on hoardings influenced the other forms of advertising.

According to Robinson (2019), studies on hoarding have proven that they have failed to prove the effectiveness of hoarding because there is no scientific evidence demonstrating their effectiveness as a marketing tool. It has been seen that hoardings are not very effective in promoting products and services, especially when compared to other forms of advertising. The main objective of this study is in order to find out how the use of hoardings is affecting the society by determining factors like brand awareness, perception, attitude about a particular brand and purchase intention among others. Other objectives are; finding out how these factors are affected by different situations such as place, time and place together with investigating price effects on buying intentions.

Objectives of the study
1. To find out how the use of hoardings is affecting the society by determining factors like brand awareness, perception, attitude about a particular brand and purchase intention/ behaviour among others.
2. To understand how consumers of both genders react to outdoor hoardings with regards to purchase intention and purchasing behaviours at retail stores.

Hypotheses
H1: Outdoor hoardings have no impact on brand awareness, perception, attitude about a particular brand and purchase intention of the consumers.
H2: Consumers of both genders react to outdoor hoardings with regards to purchase intention and purchasing behaviours at retail stores in the same way.

Method
Design: This research used a survey for the primary data collection. The survey research findings are based on the views of domestic consumers on different types of outdoor hoarding advertisements that are seen in the city. Likert scales were used to find the impact of the outdoor hoarding advertisements on the consumers' buying behaviour. Later, averages were calculated and a linear regression analysis was done to check the impact of outdoor hoardings on the brand awareness, perception, attitude about a particular brand and purchase intention.
Cross sectional study: Subjects are drawn from a survey conducted across the city. The sample was selected using purposive sampling technique. After the selection, a questionnaire was given to the respondents. A total of 200 responses were collected and data analysed using SPSS (Statistical Package for Social Science) software.

Data Analysis

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	18-30 years	59	29.5	29.5	29.5
	31-40 years	95	47.5	47.5	77.0

41-50 years	25	12.5	12.5	89.5
51-60 years	18	9.0	9.0	98.5
Above 60 years	3	1.5	1.5	100.0
Total	200	100.0	100.0	

Table no 1. Age of respondents.

The above table shows that most of the sample population (59%) has an age range between 18-30 years and 31-40 years constituting 41% of the sample. This is followed by 25% in the age group of 41-50 years, 18% from 51-60 years and 3% have reported themselves to be above 60 years.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	100	50.0	50.0	50.0
	Female	100	50.0	50.0	100.0
	Total	200	100.0	100.0	

Table no 2. Gender of respondents.

The above table shows that the sample population consists of an equal number of males and females (50%). The number of the male and female respondents in this study were equal so as to make sure that the results that have been achieved are more reliable.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Business	56	28.0	28.0	28.0
	Salaried Employee	103	51.5	51.5	79.5
	Homemaker	10	5.0	5.0	84.5
	Other	31	15.5	15.5	100.0
	Total	200	100.0	100.0	

Table no 3. Occupation of respondents.

The above table shows the occupation of the respondents and reveals that 56% of those surveyed are in business, 103 are salaried employees, 10 are homemakers, and 31 fall under 'other'. This indicates that there is a wide variety of occupations represented among the sample population. This can be useful in understanding different levels of exposure to hoardings, based on occupation and other factors.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0-1 lakh	9	4.5	4.5	4.5
	1-5 lakhs	32	16.0	16.0	20.5
	5-10 lakhs	99	49.5	49.5	70.0
	10-20 lakhs	54	27.0	27.0	97.0
	Above 20 lakhs	6	3.0	3.0	100.0
	Total	200	100.0	100.0	

Table no 4. Income of respondents.

The above table shows that 4.5% of the respondents had an income of 0-1 lakhs. 16.0% of the sample population earned between 1-5 lakhs per annum, 49.5% between 5-10 lakhs and 27.0% earned between 10-20 lakhs per year. Lastly, only 3% reported their income to be above 20 lakhs per annum. This indicates that the sample population was mainly from the middle-income bracket. This helps to understand how different levels of income may affect people's interactions with hoardings and other forms of advertising.

	N	Mean	Std. Deviation	Std. Error Mean
Brand Awareness	200	3.6400	.99264	.07019
Brand Perception	200	3.5450	.99646	.07046
Attitude	200	3.4150	1.00889	.07134
Purchase intention	200	3.4650	1.03641	.07329
Purchase behaviour	200	3.3900	.92855	.06566

Table no 5.One-sample test.

The above table shows the level of impact outdoor advertising through hoardings has on the brand awareness, brand perception, attitude, purchase intention and purchase behaviour of the consumers in general. The table shows that all the means are above the value of 3.0 which is meant as average impact on a Likert scale. This also

shows that advertising through hoardings has an above average impact on the various aspects of consumer awareness and psychology. To check if the results were statistically significant, a one sample T test was used, The following were the results of the one sample T-test.

| | Test Value = 3 | | | | | |
| | | | | | 95% Confidence Interval of the Difference | |
	t	df	Sig. (2-tailed)	Mean Difference	Lower	Upper
Brand Awareness	9.118	199	.000	.64000	.5016	.7784
Brand Perception	7.735	199	.000	.54500	.4061	.6839
Attitude	5.817	199	.000	.41500	.2743	.5557
Purchase intention	6.345	199	.000	.46500	.3205	.6095
Purchase behaviour	5.940	199	.000	.39000	.2605	.5195

Table no 6. One-sample test.

The above table it can be seen that the mean differences are positive all throughout the table. This helps us to reject the null hypothesis and accept the alternative hypothesis that the assumed mean of 3 is not equal to the actual means in any of the cases. It means that "Outdoor hoardings have above average impact on brand awareness, perception, attitude about a particular brand and purchase intention/ behaviour of the consumers."

Thus regarding the first hypothesis, we reject the null hypothesis and accept the alternate hypothesis. Next, it needs to be found out how consumers of both genders react to outdoor hoardings with regards to brand awareness, brand perception, attitude, purchase intention/behaviour. For this an independent sample T test was used. The following were the results of the test.

	Gender	N	Mean	Std. Deviation	Std. Error Mean
Brand Awareness	Male	100	3.6000	1.04447	.10445
	Female	100	3.6800	.94152	.09415
Brand Perception	Male	100	3.3900	1.02391	.10239
	Female	100	3.7000	.94815	.09482
Attitude	Male	100	3.4300	1.01757	.10176
	Female	100	3.4000	1.00504	.10050
Purchase intention	Male	100	3.4800	1.04910	.10491
	Female	100	3.4500	1.02863	.10286
Purchase behaviour	Male	100	3.2700	.99346	.09935
	Female	100	3.5100	.84680	.08468

Table no 7. Group statistics.

The above table shows that the means are almost equal. However, an Independent samples T test must be used to find out whether the differences in the means is statistically different.

| | | Levene's Test for Equality of Variances | | t-test for Equality of Means | | | | | | |
| | | | | | | | | | 95% Confidence Interval of the Difference | |
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Brand Awareness	Equal variances assumed	2.765	.098	-.569	198	.570	-.08000	.14062	-.35730	.19730
	Equal variances not assumed			-.569	195.906	.570	-.08000	.14062	-.35732	.19732
Brand Perception	Equal variances assumed	1.829	.178	-2.221	198	.027	-.31000	.13955	-.58519	-.03481

	Equal variances not assumed			-2.221	196.842	.027	-.31000	.13955	-.58520	-.03480
Attitude	Equal variances assumed	.024	.878	.210	198	.834	.03000	.14302	-.25204	.31204
	Equal variances not assumed			.210	197.970	.834	.03000	.14302	-.25204	.31204
Purchase intention	Equal variances assumed	.029	.864	.204	198	.838	.03000	.14692	-.25974	.31974
	Equal variances not assumed			.204	197.923	.838	.03000	.14692	-.25974	.31974
Purchase behaviour	Equal variances assumed	1.331	.250	-1.839	198	.067	-.24000	.13054	-.49742	.01742
	Equal variances not assumed			-1.839	193.154	.068	-.24000	.13054	-.49746	.01746

Table no 8. Independent sample test.

According to the above table, the Brand Awareness, attitude, purchase intention and purchase behaviour are statistically equal as the P values are greater than 0.05. The difference only lies in the brand perception. However, it must be noted that there are several studies which show that the brand perception among males and females is different. Since the majority of the factors are statistically equal, we can accept the null hypothesis and accept that "Consumers of both genders react to outdoor hoardings with regards to purchase intention and purchasing behaviours at retail stores in the same way."

Conclusion
The results of the study show that consumers of both genders react to outdoor hoardings with regards to purchase intention and purchasing behaviours at retail stores in the same way. Moreover, there is a slight difference in brand perceptions between males and females but it is not statistically significant. Thus, advertisers should be aware that they can target all genders when creating their advertising campaigns, as they will respond in similar ways. This research further highlights how important it is for marketers to understand their target audience when designing effective marketing strategies that meet consumer needs and create desired outcomes. Overall, this research has highlighted the similarities between male and female responses towards outdoor hoardings at retail stores. It provides valuable insights into how consumers perceive these ads and how marketers can best utilize them for effective advertising campaigns. The findings of this research suggest that outdoor hoardings are an important tool for marketers to target both genders and create effective advertising campaigns as consumers of both genders react similarly when exposed to such advertisements. This research can be used by marketers to understand the impact of their advertisements on different demographics and make informed decisions about the design, placement and messaging strategies used in the campaign. Furthermore, further studies should be conducted in order to understand the differences between male and female responses towards outdoor hoardings further. This will help us better understand how we can use these ads effectively to reach our target audience and maximize their potential.

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IMPACT OF REAL ESTATE REGULATORY AUTHORITY (RERA) ACT 2016

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ABSTRACT
Since a long time, there have been a greater number of calls for better transparency and accountability in real estate transactions. The laws were too ambiguous, the recourse methodologies opaque, the homebuyers unorganized, and the legal process overburdened. According to the Press note report released by Real Estate Regulation and Development Act (RERA) was approved by the Cabinet in May 2016. Real estate is a state-owned entity, and its execution and operations must be executed by every single state and government separately. It also has a reserved right to make necessary changes in the law if necessary. In India, Maharashtra is the first state who has implemented Real Estate Regulation and Development Act for the first time with effect from April 1, 2017. This is most important to implement because in Maharashtra, Mumbai is the leading real estate market in India it has residential as well as commercial properties. Hence, the implementation of this act in Maharashtra significantly plays an important role. So, what were the consequences of the implementation of the Real Estate Regulation and Development Act on the real estate market? This paper reviews the impact of Real Estate Regulatory Authority (RERA) Act 2016.
Keywords: RERA, Influence, Buyers, Sellers, Transparency

Introduction

In the Indian Economy implementation of Goods and Services Tax has made significant changes in Tax calculation and its operations in the sectors of Indian construction industry. GST in the construction sector has been significantly increased by 18%. The government also increased the GST Rate in the construction industry from 12% to 18%. It is permitted to deduct the world value which is approximately equal to one-third of the total amount charged by the property developer in the GST. In this research article it has identified and put focus on issues affecting the construction industry through GST. Researcher put his opinion and say delays in development in construction projects are one of the most common problems causing one of negative effects on construction projects. Delays in construction projects will be reduced once we identify and list out causes and problems. From 1st May 2016 RERA Act came into actual implementation later on 1st May 2017 RERA Act again get amended with some major modifications. The objectives of this RERA Act are to certify transparency puts efficiency in the real estate industry in relation to increase sales value of the property like apartment, building or housing project; it also helps to protect consumers and gives great satisfaction. This act also sets up a speedy resolution about doubt resolution raised by consumers in the market and helps stakeholder to appeal in a tribunal with respect to the decisions, directives, or directives of the housing regulatory. Earlier to RERA, there was no clarity about the carpet location, Builders will sell the property by adding their own loading, pricing, payment methods in the property and based on that builders will calculate the final price of the property. There were frauds, and vague project descriptions. This research paper has taken significant effort and put his views on the immediate impact of this act and list out action taken by builders, as well as the customer. Scope for the study is restricted to Pune region only.

Literature review

Puri & Ghorpade (2019) reveals that the effects of the pandemic are already being observed and seen around the world, everyone has their own or different opinions about the impact of COVID-19 on the housing segment. A health emergency that has forced us to launch the largest home-based study ever conducted. A lot of changes have happened since the Corona virus entered the world. Among the countries using excessive measures to control the pandemic, their entire businesses have stopped around the world, all the financial institutions forced

towards the lower their projection considering global economic growth for their country, including India. The consequence faced by India with respect to India is heading for a historic 4.5% decline in FY21, as the eruption of the pandemic. A construction project is generally accepted as a successful project where the objective of the project is to complete the plan project on time with the planned objectives and deadlines, within the budget and the required quality level. In India Goods and Service Tax is a value added tax applied for the supply of goods and services from the government. Khot & Shaikh (2016) say that Real Estate Regulation and Development could be a changing the history of Indian construction industry. The law applies to undeveloped projects and new projects. The scope for the study consists of Residential and commercial projects. To implement the Bill, Real estate agents and sellers are also considered. Objective of the Bill is to cover all different aspects of the real construction industry. Motivation is to ensure better accountability and clarity in the system. In addition, it was fully proposed to protect the concerns of homeowners and to incorporate and invest within the real estate sector. This ACT is also applied for undeveloped projects as well as new projects. The scope of the Bill is to cover all aspects related to the real estate system.

The act was carried out in two phases, half of which was executed in 2016 and the other half in 2017. The RERA has promised to bring about significant improvements in the sector, by increasing clarity and efficiency, making the sector 'consumer-friendly'. The author intends to review the changes brought about by the action, and how they will benefit consumers. This paper also carefully analyzes errors and issues related to the action and ultimately offers some suggestions for those limitations. Finally, the author discusses the rules for important cases that appear under the RERA.

Chobhe & Khandare (2021) have done a comparative study of RERA in the states of Maharashtra and Gujarat. The Indian Real Estate Sector has become the second largest employer after the Indians agricultural sector. But this sector has not yet been consolidated. To make this sector stronger and to regulate the Government of India introduced the RERA Act in India on May 01, 2016. This Act is a legal model for all states of India. So, all states in India are required to establish individual Real Estate Regulatory Authority under the direction of the Indian RERA Act. This official is responsible for bringing efficiency, transparency, and accountability to the sector within a year and is responsible for all states establishing the RERA Authority under the Indian RERA Act, 2016. To study performance of both MahaRERA and GujRERA quantitative comparative study and appropriate performance will be considered using the parameters of the Housing Authority. For conducting comparative research "growth rate" is considered the "basis" of the study. Because Maharashtra and Gujarat states are geographically different, they are also less populous in both rural and urban areas. Financial data for the Financial Year such as 2017-2018, 2018-2019, 2019-2020 will be used. After a comparative study using the following parameters, researchers reached the conclusions that the growth rate of projects and the registration of the GujRERA agent was significantly higher than MahaRERA. But in terms of population MahaRERA has seen more registrations of projects and agents than GujRERA yet growth level GujRERA is higher than MahaRERA. MahaRERA's growth rate is slowly increasing every year. Briefly the performance of a comparative study of both provincial authorities shows that the implementation of both state authorities is effective and efficient. Both national authorities MahaRERA GujRERA have carried out their duties successfully. However, the quantitative and qualitative performance of both provincial authorities is expected to keep their growth rate graph growing faster and faster than ever before.

Kadam and others (2018) has written that the housing sector is one of the largest participants in national GDP and job creation. Surprisingly, it is unregulated despite being an important part of the economy. The real estate sector remains unregulated. The Real Estate Sector, to a lesser extent, is regulated and regulated at the local government level and every regional government has its own set of rules and regulations for real estate development. Due to the poor judiciary system, the developers have been taking buyers of buildings for a ride, as well as including the real estate sector at the bottom of the pyramid of customer protection and satisfaction. As things get worse, they have changed for the worse and due to pressure, an urgent need was created for a cohesive regulation law consumer protection framework.

Patel and others (2020) points out that written that the real estate industry is the one that needs a lot of capital and is a very dynamic Sector. The deviation in any government policy anyhow affects the sector in a good or bad way. Recent rapid growth of the sector emphasizes to keep watch in the sector carefully. The sector should be beneficial to all its stakeholders and not to just the builders. So, this sector operated in the most dangerous ways as the builders were unable to adhere to their promises of standard and project completion. As a result, the customer often faced many problems. As a result of such developer behavior there was a gap of trust between the participants. As many other industries are dependent on the real estate Sector, there was a great need to address this issue. The RERA statute, which establishes guidelines and assesses all industry participants, was

developed by the Indian government in this regard. This study was created to examine the activity and offer some modifications that may be made to the system to make it more user-friendly and effective.

Shinde and others (2018) view that the passing of the Maha-RERA Act of 2016 will be a step forward in the complex real estate market for the benefit of both the seller as well the buyer. Prior to the introduction of the Maha-RERA action there was no centricity for the real and no transparency in between buyer and seller. But there are hopes for that and there will be the establishment of appropriate markets for the housing industry. Setting up an appellate court, the department has a quick problem-solving system to provide a positive response to all cases in resolving related disputes. Many of the conditions, such as the carpet area, encourage the promoters of co-operation, the sale of parking areas etc. areas where there was a lot of confusion is cleared by this Act.

Khan (2020) consider the use and related issues regarding the Real Estate Regulation Act. The Real Estate sector is very important from personal and national importance. The RERA regulates the sector and reduces customer uncertainty. RERA was introduced in 2017. This law provides for a variety of conditions, focusing mainly on the various issues of promoters, builders, real estate agents and customers as well. This action is a significant change in the improvement of government efficiency in the management of the Real Estate Sector. This focus on transparency, safety, imposes penalties on faulty builders and follows a regulatory approach to the sector. Current problems from municipal cities such as New Delhi and Mumbai are also described in this paper. RERA came along with two other major developments in the Indian economy, namely, demonetization in 2016, and Goods and Services Tax (GST) Act in 2017. So, some authors have tried to assess the impact of all these developments together on the real estate sector. Comprehensive studies taking into account the impact of RERA are very few.

RERA and transparency
RERA has brought transparency to the Property market by following means:
RERA has made price offers by developing more transparency. Earlier developers were selling properties based on built-up areas to customers. Additionally, this refers to typical equipment like loading walls. As a result, the buyer is unable to understand precisely what he is purchasing. Builders will now be required to begin from the carpet area, or the actual interior space that a person may live in, under RERA. As a result, the quote will become more transparent and realistic, and the consumer will get a sense of the price per square foot. Standardization makes comparison easier as well.

Parking charges are another important point between builder and customer. Presently, while developing the flats, parking charges vary from Rs 2 lakh to 6 lakh depending on property which are charged apart from the deal. RERA states that parking charges should be mentioned in agreement.

Real estate agents are not yet well organized. RERA demands for registration of all real estate agents with relevant authority. Because of this registration customer fraud will not be there. The customer and agent relationship is made clear by the RERA.

RERA has certain very precise provisions for completion of projects in time by the builders. A punishment of a fine and imprisonment for 3 years is there for delay in completing the project. In addition, RERA contains a clause that allows for a refund to be requested within 15 days of the purchase if there is a delay in the project's delivery or if the buyer is dissatisfied with the property.

RERA further places an obligation on the builder to provide complete and crystal-clear information to the buyers. The builder / developer must provide complete information about the land ownership report, all pending legal disputes, all probable easements, intention of the proponent to use floor space index, use of building technology, design guidelines etc. means much more lucidity for the property buyer.

Only the RERA registered, and eligible properties are allowed to real estate agents to sell. If they sell other than these properties, they will be penalized. So, this assures that the agents/brokers will promote only those properties which meet the conditions given by RERA and not those which are not meeting the conditions of RERA.

RERA also takes the mini projects under the regulation. Presently, projects with an area of one thousand square meters only fall under the scope of the regulation. This was reduced to Five hundred square meters or a minimum of eight apartments. This has also brought many fewer costing projects into the legislative framework and safeguards.

In a major action to protect the interests of the consumer, it is mandatory under the law for the builder to keep seventy percent of the amounts realized from the allotments from time to time in a different bank account maintained with the scheduled bank to cover the building cost and land cost.

There have been a lot of instances recently when builders have refused to accept responsibility for structural flaws in the structure. In accordance with RERA, the builder shall be responsible for structural flaws in the property's construction for a maximum of five years. To keep away customers getting into trouble owing to shaky land titles where inheritance problems are frequent, the builder must also make sure that the title to the land is covered.

A state agency for regulation has been created to act as a nodal body for redressal of all real estate complaints, conflicts, and associated issues. The basic focus will be on real estate customer complaints and will consist of the Chief Justice, the Secretary of State for Housing and Legal Affairs (Angelone.com, 2022).

Conclusion

The industry that generates the most money is real estate, and it is the most unstable industry. In the real estate industry, where builders could not keep their claims of quality and delivery, the job was done in a riskier manner. The consumer used to have several problems as a result. The RERA bill was created by the Indian government, which imposes restrictions on builders and assesses all segment stockholders. In the process of implementation of RERA, not only will the interests of customers be protected, but builders will also benefit from greater transparency. In fact, regulation has always helped the market to develop more significantly, as we have seen in the case of capital markets. For a real estate market that is plagued with overcapacity, this will surely be a boon. Transparency promotes trust which is a key requisite for any relationship including a commercial one. RERA has improved trust between buyers and sellers and has helped create better relationships which will go a long way in ensuring good growth for the real estate market.

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INDUSTRY 5.0: ANALYSIS, APPLICATIONS AND PROGNOSIS

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ABSTRACT

Industries are the major forces behind economic growth. However, the industries and its workers are directly impacted by changes brought about by the technological revolutions.

Industry 4.0, is here for the last one decade and is still growing in attention and acceptance throughout the world. It integrates the real world with its "virtual twins." Industry 4.0 has revamped the production systems by improving the operational effectiveness and developed novel business models, products and services. Industry 4.0 focuses on increasing the productivity and sustainability of industrial processes and emphasizes on both, viz digitalization and digitization of systems which may further lead to improvements. Many countries have invested significantly to harness its benefits and a substantial amount of research has been carried out into creating and implementing Industry 4.0 technologies.

A new industrial paradigm called Industry 5.0 emerged very shortly after Industry 4.0, sparking discussions regarding the new paradigm's purpose and justifications for its use. Industry 4.0 is less focused on humans and more on machines and systems. As a result, various countries have initiated to design and develop the human-centric aspect of technologies, systems, and services, known as Industry 5.0. It is a shift in paradigm that will place less emphasis on technology and will impact and influence societal transformation. Industry 4.0 is driven by technology whereas Industry 5.0 is driven by value. Human welfare, sustainability and resilience will be the area of focus of Industry 5.0. It is conceived as an expansion of Industry 4.0 with a social and environmental component. The coexistence of two Industrial Revolutions viz 4.0 and 5.0, raises issues, which calls for debates and explanations.

This paper aims to discuss Industry 5.0, analyze its potential opportunities and applications, explain the various technologies enabling it, focus on inherent challenges in its implementation, and discuss its prospects.

Keywords: Industrial Revolution, Industry 5.0, COBOTS, Human Machine Collaboration

Organization of the paper

Section 1 provides a brief discussion on the Industrial Revolution and its progression from Industry 1.0 to Industry 5.0. It defines Industry 5.0 from the viewpoint of different authors and highlights its attributes. Section 2 defines and introduces Industry 5.0 with a detailed literature review on its concepts and ideas. Applications of Industry 5.0 and its social implications are highlighted in section 3. Section 4 focuses on the technologies that are the driving force behind Industry 5.0. In section 5, challenges of Industry 5.0 are discussed. The conclusion is provided by section 6, which summarizes the entire research paper and highlights the future course toward the implementation of Industry 5.0.

Introduction

Disruptive technical innovations have historically been the main drivers of industrial revolutions, altering manufacturing paradigms and the methods for meeting consumer demand.

By enabling machines to produce items using newly devised methods and techniques, Industry 1.0, which occurred in the eighteenth century, significantly altered the industrial systems. The switch from manual to steam- or water-powered industrial equipment characterized the 1st Industrial Revolution. Due to the arrival of

Industry 1.0, the economy transitioned from being dominated by handicrafts to one dominated by machinery, influencing sectors including mining, textile, agriculture, glass, and others. (Longo, Padovano, & Umbrella, 2020).

Between the years 1871 to 1914, the industrial sector observed a successive transition in the form of Industry 2.0, which promoted the rapid circulation of innovative ideas. The Second Industrial Revolution was made possible by electricity, which renovated industries into cutting-edge manufacturing, which resulted in greater productivity and substantial fiscal expansion.

 Automation of computers and memory programmed controls in the 1970s of the 20th centuries, the digital revolution i.e., Industry 3.0 began. With the advent of communication technologies and field-level computers, production became increasingly automated. The usage of integrated circuit chips, digital logic, mass production, and related technologies—including digital cellular phones, computers, and internet—are the focal points of this particular phase (Pathak, Kothari, Vinoba, & Tyagi, 2021), (He, Ma, Zeadally, Kumar, & Liang, 2017).

The digital revolution has enabled the conversion of technology to digital form. The blend of physical assets and cutting-edge technologies like AI, IoT, robots, 3D printing, cloud computing etc. is known as "Industry 4.0". Organizations that have implemented Industry 4.0 are adaptable and ready to make data-driven decisions (Leone, 2020).

As companies adopted Industry 4.0, it became apparent that it relied more on digitalization and AI enabled technologies to increase the production flexibility and efficiency than it did on the fundamental ideas of sustainability and social justice. This resulted in the 5th IR and thus Industry 5.0 emerged. The idea of Industry 5.0 is put up as an addition to the current Industry 4.0 to achieve technological and industrial goals without compromising socioeconomic and environmental performance.

Literature review characterizing Industry 5.0:
Industry 4.0 primarily focuses on a shift in the industrial paradigm that is driven by technology; society and human factors have received less emphasis. The potential job loss and lack of job security brought by the rising use of autonomous systems is one worry associated with this industrial revolution (Doyle-Kent & Kopacek, 2019). The technological transition must therefore be made sustainably and in accordance with the goals of socioeconomic development (Nahavandi, 2019). Considerations to people and the society throughout the industrial changeover gave rise to "Industry 5.0", which (Rada, 2015) introduced in 2015 to advance the idea of "Industrial Upcycling." Studies are done to differentiate the goals, objectives, and techniques of "Industry 5.0" as a novel phase of the engineering transition. Keidanren, the most significant business organization in Japan, proposed "Society 5.0" to track the effects of this paradigm shift. This concept aims to protect societal, environmental, and economic benefits while exploiting technological breakthroughs (Fummi, 2021). It tries to reverse the revolutionary solutions for the betterment of human life. Over the past few years, Industry 5.0 has focused a great deal of attention on human-robot collaboration with a focus on the human's role in the digital revolution. Additionally, several studies examine the role of humans in logistics from a variety of angles, including ethical, technical, Sociological, operational, safety, etc.; this is the primary research field for this new IR.

In fact, there are several speculations regarding the "Age of Augmentation," in which the human and the machine can coexist and collaborate, prior to this formal launch of Industry 5.0. (Longo, Padovano & Umbrella, 2020). (Letto, Ancillai, Sabatini, Carayannis, & Gregori, 2022), believes that "Industry 5.0" brought sturdy, ecologically friendly, and human-centric ideas to the industrial revolution. It will transform production processes worldwide by eliminating repetitive tasks from human labor.

 "Industry 5.0" technologies are being adopted more widely, but this will not reduce the value of people; on the contrary, it will encourage the dual amalgamation of human and machine intelligence in a cooperative setting (Bednar & Welch, 2020). The borders between the real world and the virtual one will be removed by industry 5.0., even though it is unclear exactly what it will do or how it will affect business (Scanlon, 2018). Collaboration between people and intelligent systems like robots will increase in "Industry 5.0", especially in the industrial sector. In this level, all boring, repetitive jobs are taken over by machines, freeing up humans to focus on their creative side while taking on more responsibility and supervising systems to improve overall production quality. This will be made possible by the desire for more complex human-machine interfaces through stronger integration, increased robot automation, and the power and ingenuity of human minds (Shelzer, 2017).

Applications of Industry 5.0:
Industry 5.0 offers advantages to the employees and workers as well as the society. Deployment of this sector promotes resource-use technologies that are sustainable and ethical. It encourages human decision-making and benefits from enabling technology that helps transform many different sectors. Some of the major applications are:

Smart Hospitals:
One of the major applications of "Industry 5.0" is a real-time, smart hospital. It is vital for enhancing medical practitioners' quality of life. By using smart healthcare technology, doctors may examine infected individuals remotely and provide useful information for better medication, for instance as in the COVID-19 pandemic (Longo, Padovano, & Umbrella, 2020), (Wu, Nguyen, Chorppath, & Fitzek, 2017). Machine learning (ML) applications make use of genetic data, natural language processing, and medical imaging. Disease detection noted that Industry 5.0 makes it possible to produce the customized smart implant correctly in accordance with changing client demands focus (Nahavandi, 2019 & Lutz, Memmert, Raabe, Dornberger, & Donath, 2020), Artificial intelligence technologies are being used in the medical industry to measure a variety of things, including levels of glucose. The standard procedure for implant creation has evolved, and it can now be used to update a variety of tools and medical equipment.

Manufacturing Industry:
"Industry 5.0" is a brand-new manufacturing model that focuses on human-machine communication. The main objective of "Industry 5.0" is to maximize human creativity and more accurate machinery's ability to work together. It creates procedures for resource recycling and reuse to make the production sustainable (Aslam, Aimin, Li, & Rehman, 2020 & Alhassan, Zhang, Shen, & Xu, 2020). Manufacturing needs to have less negative environmental effects, too. Utilizing additive manufacturing, personalization must be increased to reduce waste and maximize resource efficiency. By releasing human workers of boring tasks, Industry 5.0 is revolutionizing industrial processes everywhere.

According to (Ghobakhloo, Fathi, Iranmanesh, Maroufkhani, & Morales, 2021) manufacturers can place production facilities in areas that have low manufacturing costs and close to sources of inexpensive raw materials. Control of plant machinery and activities related to the production lifecycle will be handled by cloud manufacturing. The manufacturing sector tries to boost production efficiency, value addition, and market share by incorporating service components into the production process. The virtualized platform, which is used cost-effectively, manages the manufacturing services. Distributed and networked production resources are used in cloud manufacturing (Deepa, 2009)

Supply Chain Management:
Supply chain 5.0, according to (Nguyen, Ebrahim, & Stylianou, 2018), emphasizes the value of cooperation between humans and COBOTS and other intelligent robots. Customers' demands for Industry 5.0 hyper-customization demands a blend of human creativity and machine proficiency. Robots are needed for supply chain management in high manufacture quantities of standard procedures, adding this to every product. This presents a hurdle since robots need the right instructions (Wang , Wang, Li, Alazab, & Song, 2020).

According to (Babamiri, Bahari, & Salimi , 2019), customizing and personalizing products don't always involve human interaction. However, it also ensures the flawless operation of the supply chain from beginning to end, including the selection of raw materials after taking into account the specific customization and modification requirements of each customer.

The goal of Industry 5.0 is to integrate intelligent and automated digital ecosystems with human interaction. The integration of human factors in such a process allows for the customization of end-user experiences and the development of effective operations (Adel, 2022).

Industry 5.0 enabling technologies:
Technologies like Digital Twins, Edge Computing, big data analytics, Internet of Everything, 6G, cobots, and blockchain can all help businesses increase efficiency and provide customized products more quickly. Thanks to these technologies that has made "Industry 5.0" a better production paradigm that places a focus on the interactions between people and technology. Human skills are now easier to automate and are more productive than before for all people and small businesses since smart robots are designed to work alongside people.

Edge Computing:

The increasing growth of the "Internet of Things (IoT)" and the accessibility of several cloud services have led to a novel term defined as "Edge Computing", that permits processing of data at the network edge. Both the transitions to "Industry 4.0" and the transition to "Industry 5.0" benefit greatly from Edge Computing. Edge computing can satisfy demands for battery life limits, latency charges, system performance demands, data protection, and privacy (Shi, Cao, Zhang, & Xu, 2016) & Pham, 2020). Edge computing lowers the cost of communication and guarantees that programmers work well even in distant areas. Some helpful jobs that Edge Computing can perform include processing of data, cache coherency, computation offload, transferring, and delivering requests. Future Industrial 5.0 applications like autonomous vehicles, UAVs, and distant patient monitoring are supported by real-time communications from Edge Computing (Abdirad, Krishnan, & Gupta, 2021). In Industry 5.0, Edge Computing permits preemptive analytics, allowing for the early discovery of failure of machines and its mitigation through the empowerment of human decision-making.

Digital Twins:

"A Digital Twin is a digital reproduction of a physical system or object". Digital representations of real-world items, like factories, wind farms, buildings, jet engines, and even larger systems like smart cities, are possible using Digital Twins (Lu, 2020). Even though the idea of Digital Twin was first introduced in 2002, it has recently gained attention with the evolution of IoT. IoT reduced the cost of Digital Twin, making it available and economical for a variety of businesses. Through IoT devices, the information from physical objects is sent to their digital equivalent for simulation. The digital mapping of real-time objects and systems utilizing Digital Twins allows for the assessment, monitoring, and avoidance of problems before they manifest in the real world. Digital Twins has been able to reduce maintenance costs and improve system performance because to the rapid growth of ML, AI and big data analytics.

The Digital Twins aids Industry 5.0 in overcoming technological obstacles by identifying them faster, pinpointing components that may be improved or modified depending on performance, making predictions more precisely, anticipating errors in future, and eliminating substantial financial losses.

Cobots:

Recent developments in robotics and automation have made working with robots increasingly important. All devices with computing capabilities have undoubtedly become smarter, and as the result of the incredibly rapid advancements in artificial intelligence and smart technology, a new field of study called as cobots has emerged. "Collaborative robots are those designed to work with humans", and because of this, automation of human skills is now easier than ever for both individuals and small businesses. Professors Edward Colgate & Professor Michael Peshkin of Northwestern University created the first cobots in the year 1996.

The original generation of cobots were passive in their operations. They also lacked engines. The modern cobots differ from older engineering robots as they can collaborate with people outside a controlled environment. When it comes to workplace safety, Cobots typically outperform regular industrial robots because they typically have sensors integrated in them and are extremely receptive to the detection of unexpected impact (Simoes, Soares, & Barros, 2020). Industry 5.0 has a lot to gain from cobots. Robots can do their intended duty while working in tandem with people, enabling clients to offer highly personalized and customized things swiftly and precisely.

Internet of Everything (IoE):

The Internet of Everything (IoE) connects people, processes, information, and things. (Bhattacharya, 2020). It significantly contributes to the creation of new possibilities for the "Industry 5.0" applications (Higginbotham, 2020)

In Industry 5.0, IoE has enabled the ability to bring forth new features, a better user experience, and anticipated advantages for businesses. The role of the IoE in Industry 5.0 has facilitated the improved consumer satisfaction and loyalty. It helps to reduce congestion from communication lines and lowers latency, and thus offers Industry 5.0, the chance to cut operating costs. Efficiency in the supply chain and logistics is a difficult problem for Industry 5.0 but, IoE will streamline production procedures and cut down on supply chain waste. Since the IoE has advanced so much, humans now share information wirelessly, primarily with the aid of wireless sensors.

Big Data Analytics:

Big data is currently a very hot topic for debate in academia and industry (Cheng, Chen, Sun, Zhang, & Tao, 2018; Javaid M. , Haleem, Singh, & Suman , 2021). It represents a vast and varied collection of data gathered from many sources. In Big Data Analytics, technologies like artificial intelligence, machine learning, social media, data mining, data fusion, etc. are widely used (Hamalainen & Inkinen, 2019). Industry 5.0 often places a

lot of emphasis on big data analytics. Some companies in "Industry 5.0" can employ big data analytics to precisely know the customer, which can be used to optimize the product prices, focus on improving manufacturing efficiency, to help reduce overhead costs etc. Some businesses, including Facebook, Twitter, and LinkedIn, employ big data analytics to promote the products and boost sales based on customer happiness. The resolution of the Industry 5.0 ecosystem depends on the integration of data, highly tailored manufacturing procedures, and intelligent technologies in the production process. Big data analytics is utilized for making judgments in real-time to increase industry competitive edge. With resources that seamlessly connect, Big Data Analytics helps Industry 5.0's mass customization operations (Majeed, 2021).

Blockchain:
Industry 5.0 benefits substantially from Blockchain technology. Centralized control of a sizable number of heterogeneously linked devices is a big difficulty in Industry 5.0. Secure peer-to-peer interactions provided by blockchain provide a permanent record-keeping system (Virjyasitavat, Da, Bi & Sapsomboon, 2018). An absolute ledger also supports operational responsibility and transparency for major events in "Industry 5.0" applications. Industry 5.0 can employ the smart contracts to ensure security through authentication and automated service-oriented operations. Blockchain-based segmented and distributed approaches can also provide a better level of data and transaction security (Mohamed & Jaroodi, 2019).

Blockchain can be used to effectively manage subscribers in Industry 5.0 by generating digital identities for diverse individuals and organizations. It is necessary for access control and stakeholder identification in any business operations carried out over a public network (Mohamed & Jaroodi, 2019). These advancements can be utilized to manage various types of assets, including real estate, products, and services. Additionally, Blockchain-based cloud manufacturing promotes machine-level communication and data sharing (Zhang, 2019).

6G & beyond:
6G will eventually be able to provide Industry 5.0 with significant value-added services. Building radio infrastructure is difficult when there is a highly dense network of thousands or hundreds of thousands of sensors, hardware components, and robots. It won't be able to handle the fast-expanding bandwidth needs with current networks due to the rapid rise of smart infrastructure and projected applications (such 4G and 5G networks). The industry 5.0 revolution will be fueled by the deployment of 6G and beyond, which will enable the delivery of reduced latency, support for high-quality services, vast IoT infrastructure, and integrated AI capabilities (Chowdhury, Shajalal, Ahmed, & Jang, 2020).

Other Technologies:
Additionally, the advancement of Industry 5.0 and the applications that go along with it depends on other modern technologies, for e.g. Extended Reality (XR), Private Mobile Network (PMN), Network Slicing (NS) etc.

Many virtualized networks can be enabled on top of a single real network infrastructure using the NS idea. It disperses physical network resources over various virtualized networks. The requirements of diverse vertical applications can be accommodated by customizing and tuning each virtualized network.

XR is another cutting-edge technology with a wide range of applications. Interactions between people and machines can be improved through XR by combining the real and virtual worlds. The word "XR" refers to a broad range of technologies, including virtual reality (VR), augmented reality (AR), and mixed reality (MR). XR technology will significantly enable various Industry 5.0 applications. XR technology is now used in applications connected to Industry 5.0 includes remote help, assembly line monitoring, remote healthcare, health education and training, indoor and localized outdoor navigation, driver and pilot training, maintenance, and drone/UAV pilot education and training. (Zikky, Fathoni, & Firdaus, 2018).

Challenges in the adoption Industry 5.0:
Due to the possible benefits of "Industry 5.0", it is a buzzword nowadays, but it also presents unique challenges for organizations.

- Modern technology adoption necessitates more effort and time from human labor.
- To work with intelligent robots, people must acquire competency-based skills. The human workers must have experience of working with robots and intelligent machines. Learning the essential technical abilities in addition to the skills and experience presents a challenge for human workers.
- Collaborative robots, artificial intelligence, real-time data, the Internet of Things, customized factories are all necessary components of industry 5.0 that calls for huge investments.

- Additional expenditures associated with training human workers for new jobs are to be incurred to boost output and efficiency.
- Since it's crucial to build trust in ecosystems, security presents a barrier for Industry 5.0. To defend against potential quantum computing applications when deploying Internet of Things nodes, the industry uses authentication on a large scale. Automation poses hazards to the company, thus it is necessary to have reliable security for it. Since "Industry 5.0" applications are severely reliant on ICT systems, stringent security standards are essential to guard against security risks.
- In smart manufacturing systems, self-organized systems require higher autonomy and social abilities. The shift from the present environment to industry 5.0 is difficult since the current systems lack independence, like integrated decision making.
- This trend further polarizes the workforce as middle-skill employment shrinks and the workforce is split into two groups: highly skilled and experienced labor and lesser paid and unqualified workers. The divide between competent and incompetent persons in society may increase as a result of this.
- Due to higher levels of automation in the sectors, the current firm strategies and business models must be modified to meet the specifications of industry 5.0. As a result of mass personalization, business strategy will emphasize customer-centric operations more. Customer subjectivity changes over time, making it difficult to often change corporate strategies and organizational frameworks.
- Drawing regulatory frameworks in industry 5.0 is difficult because of the use of automation. For instance, who will be responsible for failures and to what extent?
- Social diversity in terms of acceptance, measurement of the creation of social and environmental value, complexity of the system and transdisciplinary research disciplines, agile, outcome-focused innovation policy that is ecosystem-oriented are some more inherent challenges in Industry 5.0.

Conclusion:

This industrial revolution involves utilizing human-machine interface to expedite and simplify tasks. The personalization concept is advanced by Industry 5.0. Industry 5.0 is employed more effectively to create a virtual environment, cutting-edge computers, and IT to satisfy the highly individualized demand. Artificial Intelligence, Big data, Cloud Computing, Internet of things (IoT), COBOTS, innovation, and creativity are all optimally integrated in Industry 5.0. It is estimated to generate higher-value jobs with more room for innovation and creative thinking. It contributes to raising labor productivity and giving customers more customization options. On the other hand, skill development for the workforce is a massive task because of highly automated industrial systems. Industry 5.0 offers a larger threat to cyber security in critical industrial automation and production lines because of its growing connectivity and adoption of standard communications protocols. Industry 5.0 may give computers more autonomy, but humans will always have the last say in ethically significant decisions. Generally, industry 5.0 is projected to revolutionize the manufacturing systems and processes by facilitating increased human-robot collaboration to deliver customized products to clients. Through programmers like Make in India, Skill India, and Start-up India, India hopes to become a manufacturing hub. With the help of these programmers and initiatives, Industry 5.0 has a great deal of potential to make India the leader in intelligent and cooperative production systems.

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MEASURING FINANCIAL PERFORMANCE OF NSE LISTED SELECTED FERTILIZER COMPANIES IN INDIA BASED ON ALTMAN'S Z SCORE

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ABSTRACT

This study focuses on eight selected leading fertilizer companies in India listed on the National Stock Exchange (NSE). The aim of the study is to assess the financial performance of the selected companies in the past five years. Mostly, the health of the companies is assessed using traditional methods such as ROIC, EPS, ROA, ROS and ROE. These traditional models do not accurately predict whether the companies are heading for bankruptcy. In this study, data from eight companies - Coromandel International, Chambal Fertiliser, Gujrat Narmada Valley Fertilizers and Chemicals, Deepak Fertilizers and Petrochemicals, Fertilizers and Chemicals Travancore, Tata Chemicals, National Fertilizers and Rashtriya Chemicals and Fertilizers - are analyzed using the Altman's Z Score. Financial stability is calculated based on Altman's Z Score and to foresee if the company is not heading towards bankruptcy. This study supports the claim that Altmans Z Score accuracy is over 80%. The trend analysis in this study provides a meaningful result for predicting the financial performance of selected companies.

Keywords: Fertilizer companies, Altman's Z Score, bankruptcy, subsidy, distress

Introduction

India's main source of income is agriculture. As per the Fertiliser Association of India, the sector contributes about 18.8% to India's GDP (for the Financial Year 2021-2022). And about, India's 58% of population is engaged in agriculture activities. Even though Indian agricultural production is independent, cultivation varies from region to region and requires a high labor input. Many rural households depend mainly on agriculture for their livelihood. Farmers for increasing their income mostly use fertilizer made from chemicals and organic material for better crop production. Organic and chemical fertilizers affect the productive land through soil degradation and erosion. The success of the agricultural sector depends mainly on the fertilizer industry. The fertilizer industry produces important plant nutrients that support the cultivation of crops. The Indian fertilizer industry produces phosphorus-containing fertilizers like diammonium hydrogen phosphate, Ammonium Dihydrogen Phosphate, Potassium, Nitrogen and Phosphorus and mono superphosphate, which contribute to healthy crops. The Indian government supervises and regulates the fertilizer industry and offers fertilizers to farmers at subsidized prices. Farmers are offered subsidies and the government reimburses fertilizer producers for the difference between the cost of manufacturing and the selling price. Based On the government figures, total output of fertilizer in 2021-22 was 43.66 million metric tons. India currently imports about 38% of the country's fertilizer requirements. The Chemical and Fertiliser Department of the Indian government has launched various initiatives to make the country self-reliant in fertilizer production. The government has prepared the following road map:
  - Phosphorus fertilizer at further subsidized prices
  - Expanding production of phosphorite deposits
  - Exploration of potential potassic ore resources
  - Encouraging joint ventures abroad
  - the acquisition of fertilizer raw material producers worldwide

By the year 2023, India has plans to be reliant on all fertilizer production. To curb imports, the government is planning greenfield projects for fertilizer production. Records show that about two trillion rupees were planned for fertilizers as subsidies to farmers in FY 2021. The 'Aatmanirbhar Bharat' programmed and the outlined roadmap for the fertilizer industry will help India become an independent producer of phosphate-based fertilizers in the years to come and accelerate agricultural production.

Literature Review

There are some research papers about the topic in the literature. In 1968, Altman published the Altman's Z Score for predicting bankruptcy. For the analysis of the company's financial situation, Z Score uses key figures from the company balance sheets and the profits and losses statements. The Z Score formula can be used to forecast the possibility that a corporation may go bankrupt in the next few years. Speculative studies are conducted using the Z Score formula to forecast the bankruptcy of companies. The Z Score can be effortlessly calculated to

analyze financial distress and to determine whether control measures can be adopted.

Since, the Indian fertilizer industry is dynamic and the sales of fertilizer companies largely depends on seasonal conditions, Altman's Z Score model proved more suitable than the traditional methods. Also, looking at the measures taken by the Government of India to be self-reliant in fertilizer production have led to numerous investments and technology transfers in recent years. The literature review included the study of the Altman's Z Score model and past application for various industries worldwide. Few segments that were studied were banks, pharmaceutical companies, manufacturing companies, hospitality companies, agricultural companies and few more.

Altman's Z-Score consists of a formula that includes several variables to predict the Z-Score value. All the research studied used the same formula with the variables required for each industry. The accuracy of Altman's Z Score formula is between 80 and 90% for predicting insolvencies a year before they occur.

Khande (2019)note in their paper on profitability analysis of fertilizer companies state that while several large fertilizer companies are profitable overall, however, profitability increases only marginally over a period of time. They also claim that there has been a significant amount of raw material imported each year for fertilizer production. This also suggests that profitability is affected as the raw material is imported and purchased at a higher cost.

(FAI, 2022)Indian Fertiliser Association said at a press release that margins for fertilizer manufacturers are very low and new investments will be difficult in the near future unless subsidies are revised. This also indicates that the fertilizer industry needs a proper assessment of the financial strength of each manufacturing company to determine whether they are heading for bankruptcy.

(Sowmiyaa, 2021) have analyzed in their study of the Indian fertilizer industries on their financial performance, which consists of the private, state, and cooperative enterprises. Their conclusions state that most of the companies are in distress zone and immediate action is required. Their study compares all the three segments and analyzes the extent of distress levels amongst the three segments. The samples were randomly selected across all vertical segments. They used Altman's Z Score for prediction. However, a lot has happened in the last three years since their study was published. The government's data shows that fertilizer companies in India have received significant support post-Covid. Their report will help in analyzing the trends of similar companies selected for this study.

(Batchelor, 2018) conducted detailed research to predict the efficacy of Altman's ZScore. Five unsuccessful and five successful enterprises were selected for the study. Based on the five successful and five unsuccessful enterprises tested, the analysis showed that the modified Z Score model yielded significant results indicating failure. The results concluded that Altman's ZScore is a very reliable method to determine whether a company will go bankrupt.

Swaliha (2020) has studied the Indian automobile industry to assess financial soundness. Altman's Z-Score calculated the most accurate results and predicted that Indian automobile companies are safe, and investors can safely invest. Their study found that the Altman's Z-Score model proved to be an extensively useful and excellent model for analyzing the financial stability of companies. It is an excellent tool for analysts working in finance and investors to assess the financial status of companies and to take appropriate measures to overcome insolvencies.

Objectives Of This Study
- Financial performance evaluation of NSE listed selected fertilizer companies.
- Applying the Altman's Z Score method, examine the financial performance of the fertilizer companies selected above.
- Perform a trend analysis for the selected fertilizer companies based on Altman's Z Score method.
- And finally, assess whether the companies are financially stable and not heading for bankruptcy.

Methodology
The samples of fertilizer companies were selected on the basis of their sales and stock performance in the past 3 years. The selected companies are listed on the National Stock Exchange (NSE) and are members of the Fertiliser Association of India. Based on the past financial performance and market capitalization in recent years, 8 companies were selected. Data was collected from annual reports and company websites. The quantitative analysis was carried out on the basis of the figures available in the balance sheets. Data for the last

five years was obtained for the companies studied. The analysis of the Z Score was evaluated for the financial years from 2018 to 2022.The survey period covers the pre covid and the post covid years. This also will help to understand if there was any impact on the fertilizer industry post covid. This research uses an exploratory and analytical method to evaluate the conclusions.

Fertilizer Companies Selected for Study:
1.   Chambal Fertilizers & Chemicals Ltd
2.   Coromandel International Ltd
3.   Gujarat Narmada Valley Fertilisers & Chemicals Ltd
4.   Deepak Fertilizers & Petrochemicals Corporation Ltd
5.   Fertilisers & Chemicals Travancore Ltd
6.   Tata Chemicals Ltd
7.   National Fertilisers Ltd
8.   Rashtriya Chemicals & Fertilisers Ltd

Application of Altman Z Score Model
The following techniques are used to obtain the variables listed in the Z Score formula and arrive at the conclusions:
1) Review of financial statements to determine the availability of data required for the Z Score analysis
2) Estimation of the market capitalization and other variables of each company for the last five years
3) Estimation of the relationships between the variables
4) Normalization of the data
5) Draft analysis to check whether the results are conclusive
6) Evaluation and interpretation of the results using the formula

The formula for the Altman's Z Score is as below:
$$Z = 0.012V_1 + 0.014V_2 + 0.033V_3 + 0.006V_4 + 0.999V_5$$
Based on the above formula, the following derived formula is obtained:
$$Z = 1.2V_1 + 1.4V_2 + 3.3V_3 + 0.6V_4 + 1.0V_5$$

The variables (V) in the above formula are described below:
V_1= working capital divided by total assets (where, working capital = current assets divided by current liabilities)

V_2 = retained earnings divided by total assets (where retained earnings = net income divided by loss plus retained earnings of previous years minus the net dividends)

V_3 = EBIT divided by total asset (Where, EBIT = Earnings Before Interest and Taxes)

V_4 = market capitalization (market value) divided by book value (Where: Market capitalization = Present Market Price of every share multiplied by Aggregate Number of shares outstanding. And Book value = total assets minus the total liabilities)

X5 = Sales divided by total assets

Z = Z Score index

The Z Score method has shown an accuracy level of 80-90% and is more reliable than traditional methods of assessing financial stability. A high Z Score suggests a good corporate health, while a low Z Score suggests a greater risk of bankruptcy

The explanation of Altmans Z Score method can be found below:
V_1= working capital divided by total assets (where, working capital = current assets divided bycurrent liabilities) : This formula is used to assess the short period financial strength of a company. A positive result indicates that the company will be able to sustain the short-term commitments, and a negative result indicates the company will strive to meet the present needs.

V_2 = retained earnings divided by total assets (where retained earnings = net income divided by loss plus retained earnings of previous years minus net dividends): This formula assesses the retained earnings or any loss to the company. A high value implies that the retained profits are used for expenditure and a low value implies

that the retained profits are saved.

V_3 = EBIT divided by total asset (Where, EBIT = Earnings Before Interest and Taxes): This formula signifies the profitability of the company. It determines whether the company can generate enough income from the business to meet the present needs.

V_4 = market capitalization (market value) divided by book value (Where: Market capitalization = Present Market Price of every share multiplied by aggregate number of shares outstanding. And, Book value = total assets minus total liabilities): This formula measures the degree of impairment of market value when the company files for insolvency. A high ratio means that investors have more confidence in the company's shares.
X5 = Sales divided by total assets: This formula implies that the company is able to generate revenue based on its assets. A high ratio indicates the financial strength of the company.

Below are details on interpreting the results based on Altman's ZScore analysis.

Z Score < 1.80	1.80 <Z Score< 3.00	Z Score > 3.00
High risk, company could go bankrupt in the near future	Stable company, company bankruptcy not foreseeable	Safe company, bankruptcy is improbable

1.80   **3.00**

Fig -1 **Altman's Z-Score Method of interpretation**

Analysis Of The Data
Altman's Z Score analysis for the selected Fertilizer companies in India (2018-2022).

Companies	2018	2019	2020	2021	2022	Average (mean of 5 years)	Analysis
Chambal Fertilisers and Chemicals Limited	1.451	1.195	1.485	2.537	2.253	1.78	Distress
Coromandel International Limited	1.795	1.947	2.32	3.269	3.29	2.52	Grey
Deepak Fertilisers and Petrochemicals Corporation Limited	1.279	1.703	1.681	1.942	2.294	1.78	Distress
The Fertilizers and Chemicals Travancore Ltd	0.397	1.33	2.229	1.539	2.01	1.50	Distress
Gujarat Narmada Valley Fertilizers & Chemicals Limited	2.269	2.287	1.851	2.265	2.961	2.33	Grey
National Fertilizers Limited	1.307	1.213	1.074	1.914	1.984	1.50	Distress
Rashtriya Chemicals and Fertilisers Limited	2.078	1.666	1.516	2.106	2.135	1.90	Grey
Tata Chemicals Limited	2.706	3.381	4.309	4.744	4.665	3.96	Safe

Table no.1

The Z Score formula uses the five variable ratios which are multiplied and added together to give a single

number. This single number is termed as the Z Score and assesses the financial health of the organization. Z Score is computed by multiplying each variable (financial ratios) by a given constant number and finally summing the values to obtain the results. In this study, balance sheet figures for the last five years from each of the companies studied were used for all Z Score calculations.

Based on the results, it is evident most businesses are in distress. The analysis also suggests that the companies are not financially stable. With the exception of Tata Chemicals, all the other seven companies are either in distress or in the grey zone.

Looking only at the last two years, all the companies have achieved a positive result. This could be due to the government's initiative to focus on the agricultural sector to make it self-sufficient. The companies included in the analysis generate most of the turnover in the fertiliser business in India. Hence, these results can be extrapolated to other fertilizer companies in India.

Another important point is that the fertilizer industry has shown a positive trend after the Covid period. The pre-Covid figures are too low and every company seems to have been in distress. The companies in distress areas are Chambal Fertilizers, Deepak Fertilizers, The Fertilizers and Chemicals Travancore and National Fertilizers. They may have to look for other options to improve their financial performance. Other options may include diversification and investment in greenfield projects. Coromandel International, Gujarat Narmada Valley Fertilizers & Chemicals and Rashtriya Chemicals and Fertilizers are in the grey zone, which means they could fall in distress if they do not act on their performance metrics now. The companies in the grey zone are also the fence-sitters.

Conclusions

Based on the study findings, the fertilizer industry is currently in the distress area, but the situation seems to have improved in the last two years. Tata Chemicals is the only company that is in the safe zone. This study also supports the claim that Altman model is a precise tool for understanding the financial performance of companies. According to the Fertiliser Association of India, a healthy compound annual growth rate (CAGR) of about 12% is expected for the years 2020 – 2025. Increasing demand and population growth, restrictions on raw material imports, procurement of raw materials from domestic sources, changing customer needs and Government of India initiatives will boost the fertiliser industry scenario in India. New areas of diversification based on research and technology transfer seem to be fueling the growth of the fertiliser industry. Government initiatives regulate subsidies and several of the companies are government owned, which played a crucial role for the fertiliser industry development in India. With the advent of organic fertilizer, there seems to be a strong growth potential for the fertilizer industry in India soon.

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ORGANIZATIONAL CULTURE PERSUADE ON EMPLOYEES CONTRIBUTION IN MANAGEMENT

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ABSTRACT
The purpose of this research is to investigate the managerial culture in the industries, and its effects on the employee involvement in Management to make all kinds of the decision. Also, to study and investigate the managerial culture and affect the encouragement of employee contribution in management. Employee involvement is an essential concept to appreciate and illustrate the nature of association between the manager and its employee. Both the parties collectively take decisions for automation, modification, expansion which is always beneficial for the organization. The employee's involvement can add to the belief and increase the good association between employer and employee. Due to enhancement of organizational ethos, it helps for the judgment building process and improves the governance style effectively. The administration and employees may exchange information, ideas, and proposals for organizational growth through employee engagement in work-related choices thanks to the research work.
Keyword: Decision making, Organizational culture, modification, automation, expansion.

Introduction:
Workers Participation in Management includes employee –management co-operation, coordination, joint consultation & joint decision-making process. Employee participation in management is a crucial factor for a company and its employees as they are the key resources for the organization. Ethics, attitudes, and actions of the people inside a business are part of its culture. The Managerial philosophy affects the way of employees who are interacting and behaving among each other. Every company's objective is the same as enlargement of profit and satisfies the requirements of the employees and the stakeholders. Build a good association with employees, boost overall performance within the company. Employee involvement in management is extremely significant because it assists the ruling formation process and minimizes the difference of opinion within the organization. Most of the companies adopt this system and involve the employees in the ruling making process; hence it reduces the interaction inequality between the manager and the employee. Through employee contribution the employees can segment their ideas, views, concepts and help to encourage better decisions, less resistance to change, increase industrial democracy and increase the open communication of employees with management and create a good working environment in the organization.

Objectives:
1. To study relationship between organizational culture and employee participating in

Management for decision making.

2. To study the impact on the organization through workers participation in management.

Literature review:
Gulzar & Advani (2016) specified that due to the employee's participation creating a proper communication between management and employees, the employees be able to participate in management's decision-making process through suggestion scheme, quality circle, which helps to attain the organizational objectives effectively.

Adam & Eaton (2016) Subordinate employees participate in one or more organizational decision-making processes on an individual or group basis. Formal Participation, Informal Participation, and Organizational Performance.

Shukla, (2017) stated that various ways are available for employee's involvement in management like suggestions scheme, works council, collective bargaining for the better growth of the organization.

Kuria (2017) stated that various proportions of employee involvement in management such as employee discussion, allocation, combined decision making and jointly negotiation. Greater is the employee participation, greater is the organizational performance.

Hashim & Shahzad (2012) mentioned that one of the influencing variables of work execution is employee association, which results in a strong link between management and employee. These strategies, which have been adopted by all businesses, will improve corporate presentation and staff productivity.

Bhatti (2013), states that various Types of Employee involvement in organizational like collective bargaining, suggestion scheme, quality circle, useful for the organization for the to improve the efficiency.

Lawrence, Iravo, Waititi (2014), assert that employee involvement in organizational decision-making has a positive impact on productivity and helps the organization reach its objectives.

Hasheem & Solomon (2012) Employee Motivation and Organizational Performance, Because the organizations maintain employee motivation, uninterrupted output is possible. The businesses attain excellent workflow harmony, which has a good impact on production.

Shahzad (2012), Impact of Organizational Culture on Organizational Performance, In contrast, a hostile work environment may lower productivity, increase turnover, and make people feel disengaged from their jobs and workplace.

Fard & Anvary (2011) found th

at types of Organizational Cultures Contribute in Shaping Learning Organizations. The types of organizational culture like bureaucratic, competitive, participative and learning helps in contributing in shaping learning organization.

Research Methodology:
Hypothesis:

H0: There is no conclusive link between corporate culture and employee management engagement.
H1: There is a considerable correlation between corporate culture and employee management engagement.

Case Processing Summary

		N	%
Cases	Valid	100	100.0
	Excluded[a]	0	.0
	Total	100	100.0

a. Listwise deletion based on all variables in the procedure.

Table 1 : Case Processing Summery

Reliability Statistics

Cronbach's Alpha	N of Items
.866	4

Table 2 : Reliability Statistics

Reliability statistics indicate the value of Cronbach's alpha is .866(86.60%). Value more than 70 or higher is considered reliable.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.717[a]	.514	.504	.59643

a. Predictors: (Constant), BM_S, HRM

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	36.495	2	18.247	51.297	.000[b]
	Residual	34.505	97	.356		
	Total	71.000	99			

a. Dependent Variable: CHNG_MNG

b. Predictors: (Constant), BM_S, HRM

Table 3 : Model Summary

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.320	.271		4.871	.000
	HRM	.223	.071	.271	3.152	.002
	BM_S	.415	.068	.528	6.148	.000

a. Dependent Variable: CHNG_MNG

Table 4 : Coefficients

The tables of regression analysis indicating p value is 0.000. Consequently, if the value of p is less than 0.05 i.e. $0.05 > 0.000$ then the relation between dependent and independent is positive.

Consequently, there is a considerable correlation between corporate culture and employee management engagement.

Hence, a competing theory "The null hypothesis is rejected since there is no substantial relationship between employee engagement in management and organisational culture."**Respondents based on Organizational culture and Employee involvement"**

S.No	Particular	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	Involvement in decision making process	4%	54 %	6%	26%	10 %
2	Involvement in collective bargaining process	46 %	18%	4%	10 %	22%
3	Involvement in quality circle	4%	42 %	18%	26 %	10%
4	Involvement in works council & suggestion scheme	38%	24%	6%	18%	14%
5	Employee Satisfaction	10%	40%	15%	20%	15%

Table 5. Respondents based on Organizational culture and Employee involvement

Interpretation

54% employees are agree for Involvement in decision making process, 46% employees are strongly agree for Involvement in collective bargaining process, 42% employees are agree for Involvement in quality circle , 38% employees are strongly agree for Involvement in works council & suggestion scheme and 40% employees are

satisfied with work culture

One Way Anova

Summary						
	Process					
						Total
N	20	20	20	20	20	20
Mean	5	5	5	5	5	25
$\sum X^2$	3744	3040	2880	2576	2616	14856
Std. Dev	22.88	18.12	16.83	14	14.40	16.22

Table 6 – Summary sheet

Result Details				
Source	**S S**	**D f**	**M S**	
Between-Process	0.5	5	0.5	F = 0.5
Within-Process	4656	21	224	
Total	4656	26		

Table 7- Result details

The Std. Dev is 16.22, The f-ratio value is 0. The p-value is 1. The result is not significant at $p < .05$.
Standard deviation of Involvement in decision making process is 20.8806, Standard Deviation of Involvement in collective bargaining process is 18.12, Standard Deviation of involvement in quality circle and work is 16.83, Standard Deviation of Involvement in works council & suggestion scheme is 14.

Findings
Employee involvement in management is the best approach for the development of an organization. Various approaches are accessible for employees' involvement in management like collective bargaining, works council, suggestion scheme and quality circle for organizational growth. Some companies do not involve the workers for the decision making process, the bad result will get for these organizations. Most of the companies adopt such types of employees' contribution in decision-making process. Employee contribution is solitary of the traditions of Job satisfaction with better decision making. Establishment has to permit the employee in their administration process. It has raised the communication, efficiency of the employees, productivity, increased the trust level and industrial peace and eliminated industrial disputes.

Suggestions:
1. Management should have a more liberal attitude towards employees; It should be progressive in sharing information.
2. The trade union should be fully supporting the management for the participation in management.
3. The decisions of joint works councils must be implemented in good faith.
4. Managements and workers should develop a proper attitude, proper co-operation and co-ordination with each other.
5. The participation should be indisputable. The decisions should be timely implemented and strictly followed.
6. Encourage the mutual understanding between management & workers.
7. Generate a proper atmosphere for pleasant & melodious employer-employee relations.

Conclusion:

Employee involvement is solitary of the changing factors of job fulfillment, and it generates a well-built relationship between administrations with employees. Nearly all the enterprises have transmission space between manager and employee. Workers' involvement helps to reduce transmission differences between employer and employee. Management tries to increase communication with the workers through suggestion schemes, quality circles and works councils so the workers can communicate their views and ideas with the management, the valuable ideas of the employees help to increase the productivity as well as quality and helps to accomplish the organization goals. Association must create an excellent working environment, through collective bargaining process. It will be useful to the organization to attain its aims and enlarge the efficiency.

There is a substantial association between organizational culture and employee contributing in management while taking any types of decisions. The companies must accept the organizational culture that creates a good working environment which inspires workers for participate in the decision making process.

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RECENT TRENDS IN CROP IDENTIFICATION AND ANALYSIS BY USING REMOTE SENSING AND GIS

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ABSTRACT
Precision agriculture (PA) is a farming technique that utilizes information technology to determine the specific needs of crops and soil for optimal health and productivity. With the recent advancement in high resolution satellite imagery, remote sensing has been implemented in various PA applications, such as monitoring crop yields, mapping soil, monitoring crop health, managing diseases and pests, assessing water stress, and controlling fertility rates. This paper investigates the advantages of employing various crop identification and analysis strategies. The identified strategy involves pre-processing captured data using a variety of methods and collecting crop data from a wide variety of satellite platforms. Various crop identification strategies have been identified and analysed using various techniques.
Keywords: Precision agriculture, Remote Sensing and GIS, Satellite Sensors

Introduction
Agriculture is crucial for producing essential items such as food, textiles, fuel, and raw materials necessary for human survival. As the population grows, it is important to ensure that agricultural activities can provide for both basic needs and sustenance. while also being sustainable and addressing issues such as climate change. According to the World Summit on Food Security, the projected number of people in the world by the year 2050 is estimated to reach 10 billion, which will increase agricultural demand by about 50% compared to 2013, assuming moderate economic growth. (Weiss, Jacob, & Duveiller, 2020)

Precision agriculture enables sustainable farming practices, which are crucial for increasing food production. Precision agriculture (PA) is a farming management approach that employs information technology to evaluate the precise needs of crops and soil in order to achieve maximum health and yield. Despite its recognized importance, PA is currently only practical on large farms. It employs a comprehensive systems approach that combines advanced technologies such as remote sensing, geographic information systems, and global positioning systems to manage crops in-season and between seasons (Praveen & Sharma, 2019).

Geospatial technology includes RS (Remote Sensing), GIS (Geographic Information System), and GPS (Global Positioning System) as shown in the following figure (1). Farmers are now able to use global navigation satellite system technology to track agricultural machinery and enhance the quality and availability of geographic information in digital form. This allows them to evaluate the spatial and temporal variations in soil, terrain, and vegetation. Additionally, farmers who use mobile technology can save their field notes and farm records on the device, which makes it easy for them to input and access data locally. GIS and GPS technology are used to create maps that are linked to geographic coordinates, which can be used to visualize different crop and soil parameters, giving farmers new tools for management and communication (Sabtu, Idris, & Ishak, 2018)
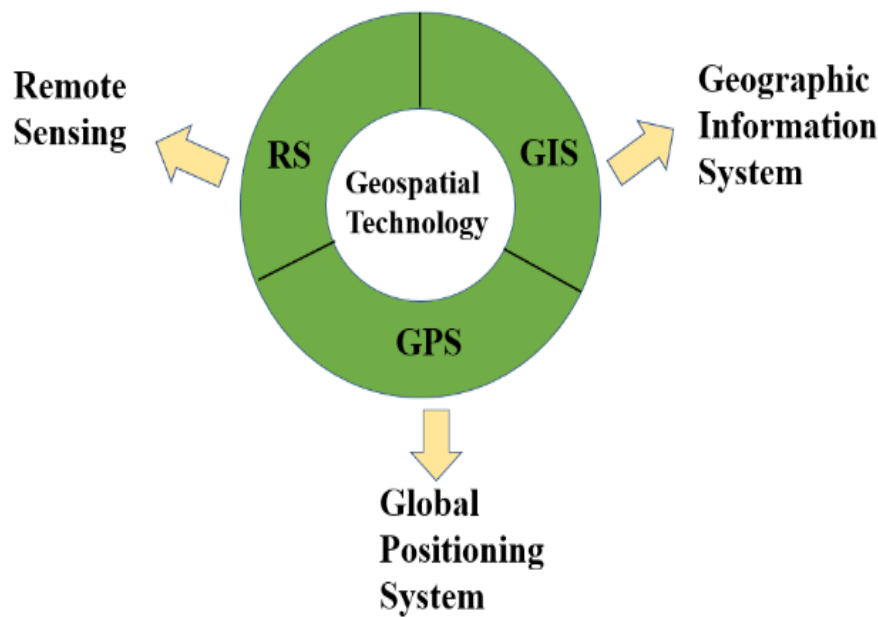
Figure 1: Components of Geospatial Technology

Precision agriculture (PA) is the use of advanced technologies to optimize inputs in farming to increase output and reduce waste. In recent years, the use of remote sensing technology in PA has grown rapidly. This is because remote sensing offers high-resolution satellite images that can be used for various PA applications such as crop monitoring, irrigation management, nutrient application, disease and pest management, and yield prediction. (Sishodia, Ray, & Singh, 2020).

Related Work

Several agricultural applications have successfully employed satellite imagery. Since 1970, satellite-based remote sensing has been used in agriculture for various purposes, including determining land use, identifying crop types, measuring leaf area, determining plant height, identifying weeds, managing diseases, forecasting crop yields, tracking crop growth and development, managing nutrient, assessing flood damage and other precision agriculture applications. The author shows that techniques for evaluating plant characteristics using satellites can be used to evaluate plant characteristics like how proximal and unmanned aircraft system-based phenotyping systems currently evaluate similar qualities. (Zhang, Marzougui & Sankaran, 2020).

Different authors use different dataset and techniques with a good result. Following table 1 describes datasets and techniques for Soybean, Maize, Sugarcane, Cotton and Wheat crops.

Crop	Dataset	Technique	Result	Ref
Soybean	MODIS	Binomial Areal Kriging Model, Gaussian Areal Kriging Model, Block Kriging Model	Global accuracy 92.1% Kappa index 0.84%	(Eustáquio Dantas Chaves , De Carvalho Alves , Silva De Oliveira , & Sáfadi , 2018)
Soybean	Google Earth Engine	Artificial neural networks (ANN), Radial basis function network (RBF), Decision tree algorithms J48 (DT) and Reduced error pruning tree (REP), Random forest (RF), and Support vector machine (SVM)	ANN was the most accurate model	(Gava, et al., 2022)
Soybean and Corn	VENµS, Sentinel-2	WISE approach	Result is compared with three data products which is consistent	(Gao, et al., 2020)
Maize	Sentinel-2 and GaoFen-1 (GF-1)	K-nearest neighbor (KNN), support vector classification (SVC), random forest (RF), and long short-term memory (LSTM)	Accuracy : RF and LSTM 88%, LSTM 90%, KNN 82% and SVC 86%	(Ren , et al., 2020)
Maize	Landsat 8 and GaoFen-1 (GF-1), Gaofen 2 satellite (GF-2) panchromatic data	Random forest (RF)	overall accuracy 95.90%, Kappa coefficient 0.92, and producer accuracy 93.91%. overall accuracy 97.79%, Kappa coefficient 0.95, and producer accuracy 97.65%.	(Zhang, et al., 2020)
Sugercane	LISS-IV	ISODATA, MLC, and vegetation indices based decision tree approaches	Vegetation indices based decision tree method , user's accuracy 88.17, producer's accuracy 86.59, overall accuracy 87.93%, and kappa coefficient 0.86	(Verma, Garg, & Hari Prasad, 2017)
Sugercane	LISS-III and LISS-IV of Resourcesat-2A	object-based classification, multi-date supervised classification and knowledge-based classification methods	overall accuracy 86.15% with kappa coefficient of 0.73	(Singh, Patel, & Danodia, 2020)
Cotton	AVIRIS sensor's Indian Pines standard dataset , EO-1 Hyperion sensor	Deep learning convolutional neural network (CNN)	For Indian Pines dataset 97.58% accuracy, while 79.43% accuracy for study area dataset	(Bhosle & Musande, 2019)
Cotton	Sentinel-1 synthetic aperture radar (SAR) and Sentinel-2 Multispectral Instrument (MSI)	Cotton Mapping Index (CMI), k-nearest neighbors, support vector machine and random forest	overall accuracy 81.20%	(Xun, Zhanga, Cao, Yang, & Yao, 2021)

Table 1: Summary of Crop Identification and Analysis

Methodology

Several strategies help with crop identification and analysis in the literature review. Therefore, the potential methodology is determined in accordance with it, as illustrated in the provided Figure (2). The first step in the data collection process is the collection of imagery data from various satellites, followed by the necessary pre-processing. Prerequisite features are retrieved after pre-processing, and the data is then categorised using several classifiers. Finally, accuracy evaluation is carried out.
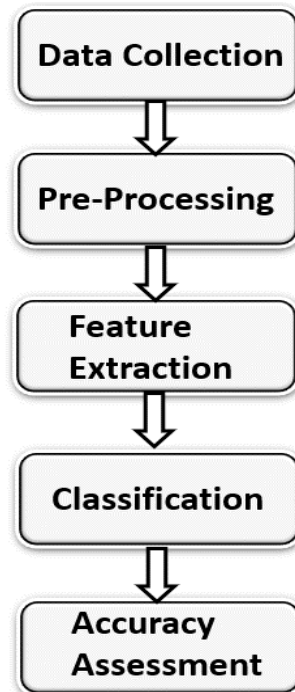
Figure 2: Methodology for processing

Data Collection

There are several satellite systems in use today that capture imagery and then deliver it to users. Each form of satellite data has its own set of features that make it suitable for a certain crop. In general, spatial resolution and spectral resolution are two features that may aid in the selection of satellite data.

The author employed MODIS, Sentinel-2 and Landsat 8 images in a recent study on the soybean crop. The author suggests that using MODIS images and the Google Earth Engine platform is a practical and effective way to automatically estimate the area of soybean fields on a large scale (Antonio da Silva Junior, 2020).

Another author examined many crops, including wheat, maize, barley, potatoes, and sugar beet, using a variety of satellite data. The study used a variety of remote sensing systems, including RapidEye, ASTER, Landsat-5-8, IRS-P6, and SPOT 6/7, to gather geographical and temporal data of the study area at low cost every year. The author found that when data was resampled for the study, the spatial resolution of the ASTER data was a good balance between the high resolution of RapidEye (5 m), the resolution of ASTER (15 m), and the lower resolution of Landsat (30 m). For the satellite images, the author has employed high-resolution images in several research projects to phenotype plant characteristics. The research demonstrates that the satellite-based phenotyping techniques can be used to evaluate plant attributes in a way that is like current methods that use UAS-based and proximal phenotyping systems (Zhang, Marzougui & Sankaran, 2020) (Waldhoff, Lussem, & Bareth, 2017).

Pre-processing

Before images are used again, errors and artefacts are fixed during pre-processing. The purpose of pre-processing functions is to enhance the capacity to understand image components both qualitatively and quantitatively. These functions include operations like geometry correction, radiometric correction, and atmospheric corrections. By accounting for sensor anomalies and eliminating superfluous sensor distortion and air noise, these techniques purge the data.

The author employed Landsat images and the time series of Sentinel-2A/B (S2) in a recent study on maize crops. For S2 time series data, the author used Framework for Operational Radiometric Correction for Environmental Monitoring (FORCE). Additionally, the pre-processing comprises picture co-registration based on Landsat data, cloud masking, topography correction, atmospheric correction, and tiling. According to the author, the accuracy of farmland identification was 84% overall, while the accuracy of the crop type map was 72% on average for the five key crop classes (Ibrahim, 2021) . The author used HLS filtering for preparing the SAR imagery data. Linear spatial and High pass filter (HPF) are combined to create the HLS filter (LSF) (Natteshan & Suresh Kumar, 2020).

Feature Extraction

Any image-based classification process must begin with the feature extraction step, in which the image is turned into meaningful information by means of a number of mathematical operations. This information is commonly referred to as features. It is envisaged that a variety of spectral and textural properties would be useful for crop classification. Vegetation Indices (VIs) are a combination of reflectance from multiple wavelengths of the Earth's surface, used to assess the vigour and cover of vegetation, as well as its growth dynamics. Table 2 contains different formulas for a variety of vegetation indices that are derived from remote sensing-based canopies. These algorithms are advantageous in providing quantitative and qualitative evaluations of vegetation (Xue & Su, 2017 & Vibhute, 2017).

Basic Vegetation Indices	Formulas
Ratio Vegetation Index (RVI)	$RVI = \dfrac{R}{NIR},$
The Difference Vegetation Index (DVI)	$DVI = NIR - R.$
The Perpendicular Vegetation Index (PVI)	$PVI = \sqrt{\left(\rho_{soil} - \rho_{veg}\right)_R^2 - \left(\rho_{soil} - \rho_{veg}\right)_{NIR}^2},$
Normalized Difference Vegetation Index (NDVI)	$NDVI = \dfrac{(\rho_{NIR} - \rho_R)}{\rho_{NIR}} + \rho_{R}.$
Vegetation Indices considering Atmospheric Effects	**Formulas**
Atmospherically Resistant Vegetation Index (ARVI)	$ARVI = \dfrac{(NIR - RB)}{(NIR + RB)},$ $\rho_{rb}^{\star} = \rho_r^{\star} - \gamma\left(\rho_b^{\star} - \rho_r^{\star}\right),$
Adjusted-Soil Vegetation Index	**Formulas**
Soil-Adjusted Vegetation Index (SAVI)	$SAVI = \dfrac{(\rho_n - \rho_r)(1 + L)}{(\rho_n + \rho_r + L)}.$
Modified Soil-Adjusted Vegetation Index (MSAVI)	$MSAVI = 0.5 * \left\{2R_{800} + 1 - SQRT\left[\left(2R_{800} + 1\right)^2 - 8\left(R_{800} - R_{670}\right)\right]\right\}.$
Optimized Soil-Adjusted Vegetation Index (OSAVI)	$OSAVI = \dfrac{(NIR - R)}{(NIR + R + X)},$
Tasseled Cap Transformation of Greenness Vegetation Index	**Formulas**
Green Vegetation Index (GVI), Yellow Vegetation Index (YVI), Soil Brightness Index (SBI)	$GVI = -0.290MSS_4 - 0.562MSS_5 + 0.600MSS_6 + 0.491MSS_7,$ $YVI = -0.829MSS_4 - 0.522MSS_5 + 0.039MSS_6 + 0.149MSS_7,$ $SBI = +0.433MSS_4 - 0.632MSS_5 + 0.586MSS_6 + 0.264MSS_7.$

Table 2: Vegetation Indices for different crops

Classification

Organizing data into categories is referred to as classification. It provides a structured approach to data, making it simpler to use, and helps ensure that it is utilized in the most efficient manner. Classification grants data a uniformed analytical and productive form. It is the process of categorising statistical data into a variety of easily comprehensible homogeneous groupings for easy interpretation. The foundation criterion for classification is attribute uniformity, and data is grouped according to similarity. When the data collected is diverse, classification is required for effective presentation and analysis. Following figure 3 shows different types of classifiers available for further processing.
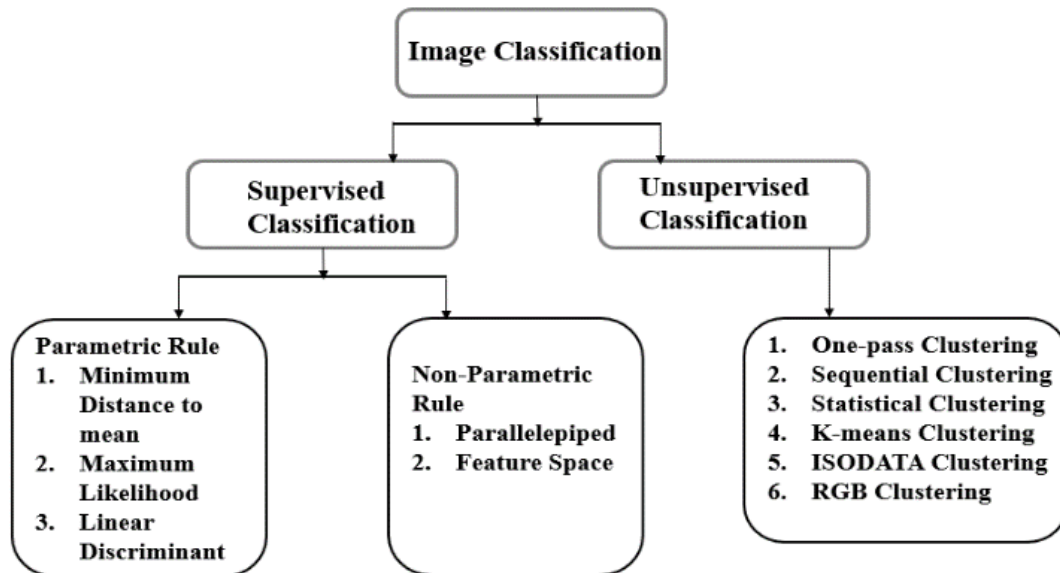
Figure 3: Types of Image Classifiers

The maximum likelihood classifier is a commonly utilized method of remote sensing classification, wherein a pixel with the highest probability of being in a specific class is assigned that class. (Ratnaparkhi, Nagne, & Gawali, 2016) This approach is both efficient and accurate. The likelihood that a single pixel falls into a certain category is assessed using maximum likelihood classification, which supposes that the data for each class in each band is normally distributed (Shivkumar & Rajashekararadhya, 2018). Linear Discriminant Analysis is a supervised technique used to reduce the number of dimensions in a dataset. It is effective in distinguishing binary outcomes, however its limitations become more evident when trying to classify multiple, distinct groups (Ducinskas & Dreiziene, 2021). Parallelepiped classification is a straightforward decision-making technique that is used to organize multispectral data. It is relatively simple to use and understand, yet highly effective. The decision boundaries create an n-dimensional parallelepiped, in the image data space allowing for the classification of data. (El Rahman, 2016). K-means clustering falls into the category of unsupervised algorithm which partitions an unlabelled dataset into distinct subsets or clusters. (Yuan & Yang, 2019) With clustering, we can group unlabelled data into distinct categories, without the need for any prior training. It offers a straightforward way to determine which group a data point belongs to (Shedthi, Shetty, & Siddappa, 2017). Hybrid Classifier is a fusion of supervised and unsupervised classifiers. Although this classification provided more correct classifications than the supervised classification, it did not considerably increase the accuracy in contrast to the unsupervised classification (Nagne, 2018). The objective of the support vector machine (SVM) algorithm is to discover a hyperplane in an N-dimensional space that can accurately separate data points (in this case N is the number of features) (Dhumal, 2018) . A random forest is constructed of multiple decision trees which are linked to the same data but with various resamples. The trees are grown by randomly selecting data points and attributes to form each tree. (Gibson, Danaher, Hehir, & Collins, 2020) All the decision trees then come together to vote on the outcome of a given test, with the result being an average of all the decisions. The Gini index can be used to segment a subset of the characteristics. Bootstrapping allows for the formation of subsets from the original dataset that have the same size as the original dataset (Mfuka, Zhang, & Byamukama, 2019).

Accuracy Assessment

We acquire the final analysis, which is the final outcome of our research effort, from which we may make strong statements about our work, once all of the previous phases are effectively finished. This is the conclusion of our

work and the start of new work. Using producer accuracy, any classification scheme can be verified for accuracy. It indicates the proportion of ground classes correctly classified. How accurate the classification results are is actual representation of User Accuracy. The measure of the overall behaviour of the classifier is the overall accuracy. For a complete image, it combines user and producer accuracy. Accuracy or agreement is measured by the kappa coefficient. It indicates the degree of image classification accuracy (Jog & Dixit, 2016).

Result and Discussion

For Soyabean crop by utilizing MODIS dataset, binomial aerial kringing model, gaussian aerial kringing model shows most elevated exactness which 92.1%. For maize crop utilizing landsat information creator utilizes arbitrary woodland calculation which gives most elevated precision 97.65% and kappa coefficient 0.95. The author claims 88.17 % user accuracy, 86.59% producer accuracy, 87.93% overall accuracy, and 0.86 kappa coefficient for sugarcane using LISS-IV data. Using a deep learning convolutional neural network, the author claims an accuracy of 97.58% for cotton using data from the AVIRIS sensor. Using lansat-8 and sentinel-1A data, the author achieves an accuracy of 85% for wheat and all major crops. The author employed three methods for it: convolution neural networks (CNNs), random forest (RF), and multilayer perceptron (MLP).

Conclusion

Earth perception symbolisms have seen outstanding development as of late and turned into a well-known use instance of geospatial innovation. The primary aim of this paper is to explore the benefits of using different crop identification and analysis techniques. The identified strategy involves pre-processing captured data using a variety of methods and collecting crop data from a variety of satellite platforms. Prominent work was done to extract useful features for crop analysis from vegetation indices. Additionally extricated highlights are grouped with various classifiers like supervised, unsupervised and machine learning classifiers. Finally, overall, users and producer's accuracy assessment can be conducted to guarantee results. We intend to employ the prescribed method in the future for crop analysis and the identification of additional significant crops. In addition, to further evaluate the method's efficacy, we are thinking about incorporating the proposed model into an additional dataset for the identification of imbalanced crops.

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RECENT TRENDS IN FLOOD MAPPING TECHNIQUES USING REMOTE SENSING AND GIS: A REVIEW

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ABSTRACT
Remote sensing (RS) and Geographic Information System (GIS) are used to evaluate the flood risk zone. This paper is based on understanding of various recent trends techniques used in flood mapping to know the flood risk and vulnerability. In this regard, studied the various literature articles where in some of them proposes, multi-criteria, hydrodynamic, and various AI models and its techniques and frequency models. With these models we are able to evaluate the expected flood risk zone. Flood maps and digital elevation models (DEM) can be derived with satellite data which is helpful for decision making. The effective use of suitable technique and implementation of flood management strategies resulting in reduced flood impact. Remote sensing and GIS is a mechanism for finding flood risk mitigation plans.
Keywords – DEM, Flood, GIS, Maps, Remote sensing

Introduction

Flood is a most common natural disaster in universe. In India, flood occurs because of continued heavy rainfall, climate change, urbanization, deforestation, melting of glacier and inadequate drainage network. This causes loss of lives, socio-economic activities, property damage. Due to irregularity in the flood, it is very crucial work to consider some hydraulic factors such as discharge of water and depth of water. Throughout the flood period acquiring geographical information from traditional sources is a tough work. Flood management planning plays key role which benefits to relief the flood impacted community to relieve the issue of flood and make the decisions (Bera, Pal & Bandyopadhyay,2012). In such a disastrous situation, remote sensing tool offers near real-time information for flood zone analysis (Agnihotri & Ohri, 2019; Shen, 2019). It is of major help to gauge flood disaster evaluation and resource allotment to find the region of flood zone speedily and exactly. To get proper information of flood disaster and its effect is required to take speedy decisions by authorities. (Bhatt, C. M.., 2017).The unexpected patterns of rainfall are also usual which consist of the flood in Mumbai on July 2005, flood in Bihar on 2019, in 2013 Kedarnath flood and Rajasthan flood (Khan, 2022).To improve awareness of the flood occurrences specifically for observation, mitigation and rescue purposes. Effective adaptation strategies are needed which include architectural measures and nonstructural measures (Mel, Viero, Carniello & D'Alpaos, 2020). Remote sensing is the excellent tool in the mapping of the spatial distribution of disaster related data (Bera, Pal, & Bandyopadhyay, 2012). Flood inundation areas have been mapped with the help of remote sensing and geographical information system.

Role of Remote sensing and GIS in flood mapping

In recent years, the development of computer technology and space borne technology has made significant changes and that will help for mapping the natural disaster. GIS and remote sensing technology is a powerful tool that will be helpful to monitor natural disasters on a near real time basis. Various satellites provide the images with very high resolution with good qualities and quantities that are easily available. Remote sensing and GIS techniques are useful for identifying and gauging the flood vulnerability zones and to prepare the flood risk map on a near real time basis. Optical remote sensing images can also be adopted for mapping floods because of their ability to collect spectral information and high resolution. Remote sensing sensors, SAR (Synthetic Aperture Radar) can have the ability to penetrate cloud and provides the clear images (Syifa, Park, Achmad, Lee & Eom, 2019). To get the accuracy of flood depth estimation is very hard in flat terrain and can mainly depend on the resolutions Digital Elevation Model Data (DEM). It is considered to determine the flood depth from hydrological data or remotely sensed data.

Related Work

To understand the flood extent, flood frequency and changes that occur due to flooding in a particular floodplain is essential because it helps better planning and emergency restoration and mitigation purposes. To get the regular and up to date information about flooding which makes proper decision and management. This information should include spatial and non-spatial information.

Syifa, (2019) discussed the benefit of remote sensing and artificial intelligence algorithm such as Artificial Neural Network (ANN) and Support Vector Machine (SVM).It involves using satellites that capture images of Earth's surface which can then be analyzed for various purposes such as mapping floods. ANNs are computer algorithms modeled after biological neural networks they learn by example rather than being explicitly programmed with instructions on how to solve problems. SVM is another type of machine learning algorithm designed to classify data into different categories based on certain features it has been trained on previously. Both these AI techniques were employed here along with before flood and after flood imagery from the satellite system Landsat 8 and Sentinel 2, allowing researchers to map out the dimensions of the flood area accurately so that future damage could potentially be prevented or mitigated more effectively if similar events occur again.

Waghwala & Agnihotri (2019) studied remote Sensing and GIS (Geographic Information System) tools to analyze the effects of urbanization on flood hazard. Remote Sensing is a technique used to observe and measure the physical characteristics of an area or region from a distance. GIS is a computer-based tool which is used to capture, store, evaluate and to represent geographic data. For each element of flood risk, flood risk index is computed by vulnerability index and hazard index.

Panhalkar & Jarag (2017) discussed multi criteria decision analysis technique which is used to evaluate the potential flood risk area. It is based on the analysis of various factors such as layer of flood, land use, land cover, infrastructure, and elevation. The analysis involves assigning weights to each factor and combining them to generate a flood risk map. RADARSAT SAR data is a satellite imagery data which is applied to segment inundated areas from non-flooded areas. It is used to identify the region affected by floods and to consider the potential of a flood risk region.

Chawan (2020) discussed the flood detection system. There are four steps which are preprocessing, classification, extraction of elements and contiguous deep convolutional neural Network (CDCNN). Flood mapping is the process for monitoring of flood for which images of before flood and after flood are compared to find the inundated area. He used the process as a Gaussian filter and image enhancement for pre-processing. Region wise segmentation is processed by threshold technology which can identify the flooded region by analyzing the color images. The contiguous deep convolutional Neural Network (CDCNN) method is used to analyze the model. This paper has elaborated the implementation of CDCNN method is used to know the flood area by making use of remote sensing images.

Anusha & Bharathi, (2020) used thresholding and unsupervised classification. Thresholding is a technique used to separate an image in two parts, which depends on the intensity of each pixel. It involves setting a certain value as the cutoff point for determining which pixels should be included or excluded from further analysis. Unsupervised Classification is another method that can be used to identify different features within an image without any prior knowledge about them. This paper used Synthetic Aperture Radar (SAR) images are efficiently identify flood area monitoring and mapping. The conclusion of this research will help to reduce the effect of floods, as well as aid in improving flexibility when it comes to managing them.

Samanta, (2018) discussed the frequency ratio model. Remote sensing is the use of satellites or aircrafts to collect data about Earth's surface. This data can be used for various purposes like mapping land cover types, monitoring changes over time, measuring water quality parameters etc. GIS helps us visualize patterns on maps that would otherwise not be visible with just raw numbers alone. Frequency ratio model was used in this study where weighted-based bivariate probability values were calculated based on input variables related to flood susceptibility zones so as to generate plausible flood risk maps using historical inventory databases. This paper has contributed to the understanding of flood vulnerability by using a Frequency Ratio model. It demonstrated how remote sensing, GIS and FR can be used together for mapping areas vulnerable to floods.

Elkhrachy (2019) discussed the impact of flash flood assessment and management. The Hydrologic Engineering Centers River Analysis software suite is used to model flash floods occurrence, calculate water discharge across the length of a canal, and create digital elevation models for study areas. GPS methods were also employed to collect elevation points which can be used to identify flood inundation maps.

From a related literature review, we can conclude that multi criteria based AHP (Analytical Hierarchy Process) method is used for flood inundation mapping. This is helpful for making proper decisions.

Methodology
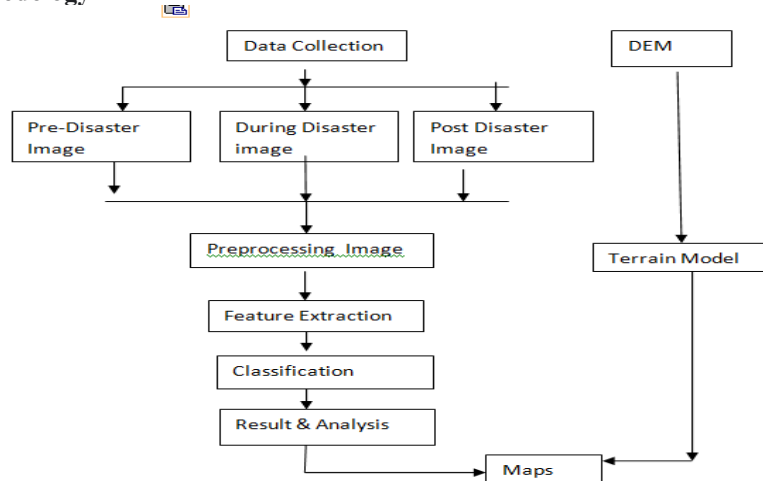
Data Collection

Radar remote sensing sensors such as SAR (synthetic aperture radar) can provide clear images due to their ability to penetrate clouds. Optical remote sensing images can be utilized to acquire spectral information. Pre and post flood images which are available with various web-based cloud platform by USGS (United State Geological survey) and Bhuvan (Syifa, Park, Achmad, Lee & Eom, 2019). Acquisition of terrain surface information is from SRTM (Shuttle Radar Topographic Mission) DEM (Digital Elevation Model). ArcGIS software used to process DEM (Das, S., & Gupta, A. ,2021).

Preprocessing:

Image preprocessing includes radiometric correction, geometric rectification, atmospheric and topographic correction (Salah, M. ,2017).

1) Feature Extraction :
   Different variables are available for feature extraction process which includes spectrum signature, textual images, surface roughness, transformed images, multi-temporal images, multisensory images, ancillary data and shape and size of objects (Salah, M. ,2017)
2) Classification

Various classification methods used to manage the floods and other evaluation based on large scale areas of disaster (Syifa, M., Park, S. J., Achmad, A. R., Lee, C., & Eom, J. 2019). For example image refinement, thresholding methods can be used to identify water body, classification of data using supervised and unsupervised methods such as maximum likelihood, PCA(principal component analysis (Elkhrachy, I. ,2019).

Various Indices used to extract water bodies:

Normalized difference vegetation index (NDVI): The normalized difference vegetation index is the standard metric which is used for vegetation index. The formula for calculating NDVI is as

$$NDVI = NIR − Red / NIR + Red \qquad\qquad Eq(1)$$

where NIR(Near infrared) and Red are the bands which give the spectral reflectance measurements. Similarly, the MNDWI(Modified Normalized Difference water Index) can be used in identifying water body in the remotely sensed data is calculated as:

$$MNDWI = Green – SWIR / Green + SWIR \qquad Eq(2)$$

where SWIR(Short Wave Infrared) and Green are the spectral reflection of the short wave infrared band and green band respectively (Devi, N. B., & Kavida, A. C., 2021).

Flood Mapping Techniques

Flood maps can help to recognize the flood risk areas and it also helps to take the decision for urban planning, domestic and land use system of a catchment area. It also gives detailed information about flood protection, mitigation and flood management systems to minimize the loss of lives and property damage (Al Faisal, A., Al Kafy, A., & Roy, S. ,2018).

Flood mapping parameters

For mapping of flood, it is required to consider some parameters such as rainfall, land use, elevation, soil texture, distance between inundation area from river, slope, drainage network, wetness index of topographic

area, geomorphology, curvature, and ruggedness index of topographic region. The following are some methods for mapping of floods.

AHP(Analytical Hierarchy Process)
This method was developed by Satty (1980), and it is one of the systematic mathematical processes that permit solving complicated decision problems. The advantage of this method is to assign the allocation of user stated weights into hierarchical structure. This technique is multi criteria-based decision support (Khan, A..,2022; Das, S., & Gupta, A. ,2021).

The Analytical Hierarchy Process is deciding which is used to assess and prioritize alternative options. The process includes pairwise comparisons to allocate weights to criteria and then uses those weights to calculate the optimal alternative. It involves breaking down the decision-making process into hierarchical levels, which are then evaluated according to criteria that are assigned weights. The weights are then used to calculate the overall rank of each alternative. AHP is often used in areas such as engineering, operations research, and management, and has been found to be particularly useful for flood risk analysis (Panhalkar, S. S., & Jarag, A. P. ,2017).

FR(Frequency ratio) Model
Frequency ratio model is a statistical technique. This technique proposes a quantitative relationship between different attributes and flood frequency. This model is used to calculate the ratio of probabilities of the flooded to non flooded region (Samanta, Pal & Palsamanta, 2018).

ANN (Artificial neural Network
ANN is the mathematical model. It is the pixel-based technique which can identify large scale disaster areas. The process of this method is to train particular tasks across several factors.It is ability to transfer input data into output data (Syifa, Park, Achmad, Lee & Eom, 2019).

SVM(Support Vector Machine)
It is an efficient method for solving nonlinear classification. It has the capability to work on high dimensional data. The kernel function is important to transform the data (Syifa, M., Park, S. J., Achmad, Lee & Eom, 2019).

Thresholding
Specifically, this method works for smooth surface area. This is the very simple method to classify flooded areas from non-flooded areas. The process of this method is to consider the pixel value which is compare with its threshold value (Chandrakant, Kakade & Jadhav, 2020; Anusha & Bharathi, 2020).
CDCNN (Contiguous Deep Convolutional Neural Network)

This method contains multilevel architecture, and each step has multiple layers. Every step contains a convolution layer, a nonlinear and a group layer. The starting point and ending point of every step is a collection of patterns known as feature maps. The ending step is defined by the features extraction process from all the entry point positions (Chandrakant & Jadhav, 2020).

Conclusion
Remote sensing and GIS are the technology for mapping of flood inundation area and also helpful for extent of flood by analyzing before flood, during flood and after flood images. Various flood mapping methods are AHP which is allowed to allocate user specified weight to hierarchical structure of criteria. Frequency ratio model measures frequency of flood with various conditioning parameters. The advanced methods such ANN, SVM, CDCNN etc are also applied for flood mapping.

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ROLE AND POTENTIAL OF BIG DATA IN DIGITAL MARKETING – A LITERATURE REVIEW

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ABSTRACT
The way businesses run has drastically changed since the advent of the Internet and digital media. Consumers spend a significant portion of their life online and primarily profit from it, which significantly alters both consumer behaviour and corporate marketing strategies. Big data has several advantages and can be quite important in digital marketing. The increased use of digital channels by customers is a result of technological improvements, which also enable marketers to collect excessive amounts of data about consumers, store that data, and utilize it whenever and however they see fit. Big data helps organizations identify the unmet needs and expectations of customers so they can succeed in business long-term. Despite the significance of big data analytics for business marketing, there is little research on this topic. The goal of the research paper is to explain the role and potential of big data in the perspective of digital marketing to add to the body of knowledge. To accomplish this goal, a thorough analysis of the literature that covers big data's definition, elements, sources, function in digital environments, and applications in business is conducted.
Keywords: Big data, Digital Marketing, Significance, Role, and Potential

Introduction:
The way businesses run has drastically changed since the beginning of the Internet and digital media. The Internet is regularly used by more than 3 billion people worldwide to do shopping, have fun, and make new friends (Chaffey, 2019). Clients spend a significant portion of their life online and primarily profit from it, which significantly alters both consumer behaviour and corporate marketing strategies (Chaffey, 2019).

The advancement of digital technology has resulted in a daily transformation of the marketing strategies used by companies to achieve an economical advantage by satisfying customer wants and expectations as well as adhering to the current environment. Consumers can readily use a variety of technical platforms, including desktop, laptop, smart phone, and tablet devices. Customers have access to a variety of product, service, and price options from many vendors in the digital environment, which also makes the purchasing process quicker and simpler.

Big Data
As a result of technology improvements, customers are engaging in an increasing number of activities through digital channels, giving businesses access to a wealth of consumer information that can be stored and used as needed. Using traditional marketing techniques to reach clients is practically impossible today. This is mostly a result of the methodologies' inability to identify client needs and expectations and to gather sufficient data about them. Businesses must generally make far better assumptions and judgements in the highly competitive business world of today. The future of enterprises depends greatly on conducting thorough market analysis.

There are numerous ways to characterise big data. (Manyika, 2011) defined "big data" as datasets that are too large to be accessed, stored, managed, or analysed using standard database software tools. Big data, or enormous information clusters, are believed to include details on customers from sources including social network posts, geotagging, and sensor outputs (Johnson, 2012). With the growth of e-commerce, more businesses are beginning to pay attention to how customers' online research affects their decision-making process about consumer behaviour (Neirotti and others, 2016). These days, businesses can gain a variety of information into how customers browse online thanks to the continually evolving eye-tracking sensor technology. Analysing data from sensors that record customer successes during online purchases allows for the customization of web sites, the issuance of personalized advertisements, and the execution of marketing activities (Fu, 2020). As a result of technology improvements, businesses now interact with customers virtually less, but by carefully analysing massive data clusters, they are learning more and more about them every day.

Big data is a component that has a lot to offer businesses if it is properly gathered, stored, and analysed. Businesses may gain a competitive edge by developing strategies that meet the needs and expectations of their

customers by utilising data that is large in volume and persistence, obtained from several sources, proven to be secure and trustworthy, and likely to be beneficial.

Digital Marketing

Businesses today encounter a data explosion because of conducting a variety of activities through digital platforms. Businesses care more than ever about data analysis and digital marketing to recognize the effects of marketing initiatives. Many digital marketing methods, such as text messaging sent from mobile devices, digital promotion, and digital media, do not require the Internet (Yasmin, 2015). Digital marketing is the method used by companies that use digital technologies to achieve their marketing goals.

Digital marketing is the process of streamlining marketing activities with the aim of encouraging consumer interaction, participation, and feedback. Businesses engage with customers in an interactive way by using digital marketing techniques (Zahay, 2021). The main objective of digital marketing is to establish interactive customer communication through digital platforms (Yasmin, 2015). Businesses must place a high priority on building relationships with customers and other partners through digital channels to take advantage of the new opportunities that these relationships can present. Making efficient and effective use of digital marketing can change production and delivery procedures and allow companies to provide a range of consumption patterns (Munar and Jacobsen, 2013).

Digital technology and data analysis may help businesses modify and expand the scope and function of their marketing initiatives (Shah and Murthi, 2021). Data analysis may help businesses understand how various marketing strategies, such as sales development, delivery, rate (pricing), product features, and TV and print advertisements, affect market share, sales income, or the brand value of a product's brand. It motivates companies to focus more on their clients' needs and exert more effort to give them memorable experiences. Customer experience has now taken the place of the idea of customer satisfaction, which serves as the foundation for marketing (Sheth and Kellstadt, 2021). Businesses continue to exist in the digitalizing world because they attach the necessary importance to data analysis and gain from digital marketing strategies.

Literature Review

People now live in a digital world where data is abundant, and technology is developing quickly. Today, marketing research and activities heavily rely on information gathered through digital sources. Technology's integration into company life makes marketing communication more difficult. Businesses must thoroughly analyse marketing performance in order to find a solution to this issue (Buhalis and Volchek, 2021). Almost no sector today has not been significantly impacted by big data analysis.

The results of big data analysis may give businesses detailed information on how their operations are performing across a range of industries, including health, tourism, business, and transportation (Benjelloun, 2015). Tourism organisations may employ digital data analysis to better understand the needs, desires, expectations, and preferences of their clients so that they can make decisions that will please them and provide them unique and lasting knowledge (Mariani, 2018). However, big data analysis in the healthcare sector provides businesses with accurate information to increase productivity and efficiency of healthcare expenditures and services, access more exact information about diseases and patients, and provide patients a more individualised service (Benjelloun, 2015). The financial industry also gains a lot from big data analysis. The ability of banks to better serve their customers, collect a wealth of data on them, implement security measures, and allow clients to conduct all manner of financial dealings through digital networks (Srivastava and Krishnan, 2015). The use of big data in agriculture has numerous advantages for the sector. Big data analysis makes it possible to analyse production strategies, adapt production schedules to climate predictions, assess supply and demand based on location and customer profiles, make decisions based on climate predictions, and assess the performance of smart receptors (Benjelloun, 2015). As can be shown, big data analysis can assist a variety of enterprises in decision-making, the development of plans and policies, and the enhancement of their revenue and ability to compete.

Businesses can get data through a variety of digital means. All types of online communication, including blogs, e-mails, sensors, and e-government activities, fall under this category. It also includes connections on regularly used social media platforms, activity on electronic banking accounts, and connections on search engines (Blazquez and Domenech, 2018). The location information provided by mobile devices, GPS, call logs, Bluetooth signals, and personal information obtained from Internet page activity (Wamba, 2017). Due to the importance of the Internet, smartphones, and other smart sensors in people's lives, many organisations now conduct their marketing operations in digital settings (Blazquez and Domenech, 2018). Businesses are using the proliferation of sensors and wireless Internet to collect various types of data in order to develop strategies for

extending the lifespan of their products (Kusiak, 2017). Data that businesses may review is collected through consumers' shopping searches, store visits, purchases of items they had intended to buy but changed their minds about and returns of such products (Xie. 2016). Consumers might leave several digital traces while using the Internet (Blazquez and Domenech, 2018). Marketers can now acquire geographic data to map out consumers' global movement and, using this mapping, make assumptions about where customers are located (Zheng, 2021). While businesses can understand consumer behaviour, they also have the chance to take part in a wide range of marketing activities, such as offering consumers advice or advertisements depending on where they are or could be (Zheng and others, 2021). Businesses can uncover previously unknown consumer information and better understand customer behaviour by combining real-time (such as geolocation) and enormous amounts of data (such as purchase history of customers) (Erevelles, 2016). Businesses must utilise big data to create new things and make crucial decisions (Tellis, 2009). Businesses can learn more about themselves thanks to reaching larger volumes of data, which can help them accept a more in-depth and comprehensive viewpoint on themselves (Barton and Court, 2012). As data's content becomes more comprehensive, marketers may see new gaps and comprehend client behaviour (Erevelles, 2016). Businesses can identify areas they previously neglected or missed, provide customers with unique experiences, and create a variety of tactics. (Barton and Court, 2012). In the digital age, there have been many changes and variations in how customers access information, engage with others, find brands they like, and most significantly, make purchases (Xu, 2016). Due to this circumstance, corporations can gather customer information that is very specific or even personal. (Wooff and Anderson, 2015). Businesses have easy access to all kinds of personal information, including the networks that customers use and the length, frequency, and timing of their visits. (Li and Kannan, 2014), Customers' IP addresses, view histories, search terms, device and browser information, session lengths, locations, educational background, gender, and age data (Ghose and Todri, 2015).

Objectives Of The Study
1. To add to the body of knowledge by clarifying the function and possibilities of big data in the context of digital marketing.

2. To study the literature of the Role and potential of big data in the digital environment.

Examples Of Businesses Using Big Data In The Digital Age
Big data helps businesses find new business possibilities and innovations, organise their everyday activities, make strategic decisions, and manage their budgets and marketing campaigns (LaValle, 2011). As a result, businesses now more than ever benefit from data collection, registration, storage, processing, and analysis.

NFLshop.com's data research revealed that ladies weren't happy with their online purchases in the summer of 2012. This happened because the retailer believed incorrectly that most women did not purchase for themselves online, but rather for gifts for their loved ones, who were primarily men. However, the research has shown that women typically shop online for themselves. Data show that the store's sales grew by 25% in a year after customising its catalogues and targeting its advertisements specifically at women (Thau, 2013).

To gather more specific information about clients' future shopping and predict an online order before the customer actually places one, Amazon has obtained a patent right to access the order history, product search history, and shopping bag records of customers shopping from businesses using big data (Banker, 2014). The attempt by Amazon to improve delivery methods rather than marketing activities exemplifies the potential power of big data analysis (Benoit and others, 2020). Using big data, Amazon is trying to grasp consumer insight and create new marketing tactics. Businesses use big data to make such drastic decisions to provide value and improve performance (Kunc and Morecroft, 2010). The updated coupons are continuously and automatically provided to customers based on customer data analysis and predictions of what customers would purchase in that month (Germann, 2014).

Target and eBay extrapolate customer looking patterns and reliability card information to better understand customer desires and expectations (Chen, 2021). While Overall Electric utilises big data to increase the productivity and effectiveness of its electricity and gas systems (Wamba 2017).

Like many other products, Nike Company bases its product development on consumer requests, keeps track of inventory, emphasizes consumer involvement in marketing initiatives, pays attention to offering customers personalized items, and increases sales as a result of customer data analysis (GalbRaith, 2014). By integrating sensors and remote application management software to collect first-hand consumer information from around four million drivers while they were on the road, Ford was able to effectively complete the necessary product renewal and design (Erevelles and others, 2016) Ford Motor, Pepsi, and Southwest Airlines look at what

customers share about themselves on social media platforms like Facebook and Twitter in order to assess the immediate effects of marketing initiatives, comprehend shifts in consumer sensitivity toward their brands, and adjust their marketing strategies as necessary (Bughin, 2010).

In conclusion, the amount of data produced through the Internet has increased in the modern world, where technology is evolving swiftly, and many different types of electronic devices may be controlled by a computer. Companies have access to a plethora of information about customer behaviour and preferences thanks to these technological gadgets (Perera, 2014). As data volume and frequency increase, businesses are benefiting more and more from big data every day (Lynch 2008). These illustrations demonstrate how big data helps firms in the era of digital marketing.

Conclusion

Big data plays a critical role in helping organisations succeed as they transition to a digital economy. Rapid technology improvements have led to consumers producing a wide variety and a lot of data. Businesses can learn more about consumer behaviour because of the volume, speed, and variety of data being produced. Businesses can fill in the gaps regarding consumers and obtain a competitive edge in the market by properly analysing those data.

Businesses must constantly contact and communicate with their clients in the highly competitive climate of today if they hope to build a lasting rapport with them. Big data can provide companies with incredibly comprehensive client information in this way. Businesses can make good judgments, come up with unique and inventive ideas, and improve corporate performance because of the information they acquire. To maintain a consumer-oriented mindset, businesses must use customer insight gained through big data and regularly update the information provided.

Findings And Recommendations

This study presents the value of big data to businesses from a marketing standpoint. According to the report, digital channels account for the great majority of customer purchases. Nowadays, big data analysis has had a significant impact and potential on practically all industries. Big data helps firms organise their everyday operations, make strategic decisions about their budgets and marketing campaigns, and find new business prospects and technological advancements (LaValle, 2011). According to the survey, firms working in a wide range of industries are becoming more and more focused on gathering, preserving, storing, processing, and analysing big data daily. As a result, employing big data in the digital age has several advantages for organizations. This study shows that big data is crucial for businesses in the digital era as they move toward digitization and long-term success. Consumers might leave several digital traces while using the Internet (Blazquez and Domenech, 2018). Businesses that keep a close eye on them can quickly grasp consumer behaviour, intentions, needs, and expectations. As a result, organizations must benefit from big data analytics if they are to please their consumers and enjoy long-term success.

Future Enhancements

This study is restricted to a thorough literature review of the role, potential, and business advantages of big data. Big data is an important topic, however, there aren't many studies on it. In upcoming research, quantitative techniques can be used to analyse consumer purchase patterns in relation to their demographic traits. Authors can conduct interviews with companies from various industries to see how they use big data for marketing purposes and how it benefits them.

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ROLE OF ACADEMICIANS IN DEVELOPING HIGHER EDUCATION SYSTEM IN INDIA

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ABSTRACT
The role of academics in developing and reforms of the higher education system has been analysed. There are many international studies which have been conducted to have a good understanding about the academics' role in building the higher education system in India. The current study is based on a sample size of 50 principals of higher educational institutions who are from leading educational institutions in Pune City, Maharashtra, India. A structured questionnaire was prepared using Google Forms and was circulated among the sample of 50 academicians (principles of higher educational institutions) using convenience sampling. The results of the study indicate that the role of the academicians in developing the system is enhancing and should be improved further.
Keywords: Academicians, higher education system, development

Introduction

One of the finest resources for the growth of the country in India is higher education. One of the important foundations for the growth of India's economy, society, and politics is said to be higher education. The Ministry of Human Resource Development's Department of Higher Education seeks to create a pool of brilliant individuals with a wealth of expertise in various fields. An ideal higher education system should have a knowledge seeker at the consumer end with the right blend and skills to utilize available opportunities through knowledge gained from an institution so that he could contribute to nation building in a better way. Higher education has been in progress for over 2500 years. With the advancement in technology and the changing time, its structure and other attributes have undergone a change.

Higher education in India is based on the centrally sponsored scheme and it has a strong network of all types of central, state, and private universities. The universities in India have been able to increase their footprints across the country to efficiently serve students.

Higher education in India is still evolving with the changing time. The terminology and methods used in the higher education sector may vary from one country to another. The higher education system has been criticized for its poor quality, which is an issue that hinders their growth potential and effect on their social and economic development. To improve its position, it is necessary that we as academicians should play a significant role by developing our institutions seriously so that we may not be adding more burden on our nation's resources.

Rural universities are actively attempting to create an interconnected ecosystem for the students in this remote region. People of the remote regions have the potential to become an asset for the country by contributing their knowledge and skills to develop their local ecosystem and contributing to nation building. To understand the role of academics in developing the higher education system in India, it is important that we first have a proper understanding about this role.

The role of academicians refers to all those people who are responsible for providing leadership, guidance, support, and services within educational institutions. The role of academics is not limited only to teaching only but it also includes other areas like research, counselling, public service etc.

The role of academicians as a tutelary body has been analysed in this paper. The current study is based on a sample size of 50 principals in leading educational institutions in Pune City, Maharashtra, India. A structured questionnaire was prepared using Google Forms and was circulated among the sample of 50 principals using convenience sampling. The study's findings show that academicians' roles are expanding and should be further enhanced.

Review of Literature

There are some literatures about the research. Khan (2020) mentioned that higher education should create a class of scholars. He mentioned that higher education plays an important role in creating a class of scholars, who could help nation building by contributing to a sustainable and prosperous nation.

According to Aiyar (2012) the role of higher education is very important for the country's economy. Higher education holds significant importance for our competitive edge over other countries as it is one of the basic needs for our development. He mentioned that the government should make all possible efforts to promote a friendly environment at higher educational institutions so that we could get more young talents and add value to our existing workforce which would remain relevant forever and will contribute to making India economically stronger than ever before.

Nair (2003) mentioned that higher education is one of the most important factors to strengthen the country's economy. He mentioned that higher education helps in the development of the young population and contributes to a better standard of living for the country.

Mendis (2014) pointed out that owing to its strength, higher education is an integral part of nation building as it plays a significant role in various aspects like improving quality of life, developing human resource, and also contributing greatly to economic growth and sustainability. He also mentioned that with rising global competition emphasizing on higher education, we have become more aware about its importance and what it could do for our future generations.

According to Choudhary (2012), higher education plays a very significant role in the development of a nation. As the countries face competition in the global market, this becomes foremost for them to develop their human resource by enhancing their skills, knowledge and improving their capacity so that they can work in all areas effectively. He mentioned that as economies of different countries are facing challenges owing to changing technology and patterns, it is necessary for all the nations to train their manpower and make them versatile so that they could contribute more towards growth and development.

Mishra (2017) mentioned that now the market is demanding highly skilled workforce in almost all industries. He also pointed out that higher education helps in developing a workforce who have vast knowledge, skill, and leadership qualities. He added that higher education is also required to create a favourable environment to encourage the students in their learning process.

Fawcett (2016) mentioned that higher education has been a concern for many different countries as they are struggling to cope with rising prices and declining quality, which affects their economies. He also mentioned that along with increased funding, it is necessary for countries to have a good policy so that the quality of higher education does not suffer, and it improves students' knowledge and skills.

Arumugam (2013) pointed out that higher education in India has helped the country a lot in improving its economy. He also mentioned that due to better management, the industry has been flourishing at a reasonable pace. Higher education has kept the country competitive in the global market as well as domestically.

Portillo (2013) mentioned that higher education is one of the necessities for a country's development. He also added that higher education has helped a lot in building India's economy which has been growing at a relatively good pace.

According to Aktar (2012), one of the most important aspects of academic discipline is the idea of scholarly mentorship. He also mentioned that this is an old tradition in Indian universities, which has contributed to making many students into competent scholars. He added that mentorship plays an important role in turning students into independent thinkers, helping them to learn from their mistakes.

Mukherjee (2013) pointed out that India has a unique higher education system, where most of the higher educational institutions are publicly funded and managed by the state governments or local bodies. He added that in this context, the academicians are one of the most important stakeholders.

Overall there is paucity of research on the role of academics in higher education and there is a need to carry out more research on this topic. The role of academicians as a tutelary body has been analysed in this paper. Due to its critical role, it is important for us to develop the higher education system in India as per our needs and requirements for making it effective and productive in all aspects. The study was conducted with the objective

of understanding the role that academicians play in imparting knowledge to students through academic institutions, which are founded by them.

Objectives of the study
1. The objective of the study is to know the role of academicians in the system by analysing their views.
2. The study focuses on developing higher education systems, such as teaching and learning methods, and ways of improving the quality.

Hypotheses:
H1: Academicians contribute to the development of higher education.
H2: The academicians have a positive outlook towards developing higher education in India to match international standards in the long run.

Method
This study is based on convenience sampling technique, where a sample of 50 academicians in Pune City, Maharashtra who teach at leading educational institutes was selected from top colleges of Pune City. The sample size was calculated as 50 respondents to represent at least 1 percent of all teachers in Pune city and has been done using Google Forms. The questionnaire was created by a researcher who has minimal knowledge about teaching academics and has been circulated among the sample of 50 principals. This questionnaire is for the purpose of understanding the opinions of the academicians on their role in developing the higher education system, teaching methods and the quality.

Results

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	30-40 years	3	6.0	6.0	6.0
	40-50 years	12	24.0	24.0	30.0
	Above 50 years	35	70.0	70.0	100.0
	Total	50	100.0	100.0	

Table no 1. Age of Respondents.

The table shows that 70% of the principals belonged to the age group of 50 years and above. 24% of the principals were between 40 to 50 years of age and 6% belonged to the 30-40 years age group. The total sample size was 100 principals.

The analysis suggests that the older generation of principals is more dominant than their younger counterparts, who are still in the process of gaining experience and developing leadership skills. It also reveals that there is a need for more young professionals to be brought into the field of education management, so that they can bring in their knowledge and innovative ideas. This could help create a more balanced educational environment and promote better learning outcomes for students.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	22	44.0	44.0	44.0
	Female	28	56.0	56.0	100.0
	Total	50	100.0	100.0	

Table no 2. Gender of Respondents.

The table indicates that 56% of the principals were females and 44% were males. The total sample size was 100 principals.

This data implies that women are playing an important role in education management, even though there is still a lot of gender imbalance in this field. It suggests that more opportunities should be provided to female educators so that they can play a greater role in the educational sector.

Perception regarding the role of Academicians in the development of Higher Education.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	2	4.0	4.0	4.0
	Disagree	2	4.0	4.0	8.0

		Frequency	Percent	Valid Percent	Cumulative Percent
	Neutral	6	12.0	12.0	20.0
	Agree	25	50.0	50.0	70.0
	Strongly Agree	15	30.0	30.0	100.0
	Total	50	100.0	100.0	

Table no 3. Academicians will have to play a crucial role in implementing the NEP 2020.

50% of respondents agreed, with 30% strongly agreeing, that academics will be essential to putting the NEP 2020 into action. 4% of respondents both disagreed and strongly disagreed with this statement, leaving 12% of respondents indifferent. As academicians are best qualified to comprehend and interpret the policies, this demonstrates that most respondents feel they should be actively involved in the implementation of the NEP 2020. Moreover, their expertise can help in creating an effective system that will enable students to achieve quality education. The results indicate that there is a need for greater collaboration between academics and policymakers.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	6	12.0	12.0	12.0
	Disagree	5	10.0	10.0	22.0
	Neutral	6	12.0	12.0	34.0
	Agree	23	46.0	46.0	80.0
	Strongly Agree	10	20.0	20.0	100.0
	Total	50	100.0	100.0	

Table no 4. The role of educators in Higher education is to teach and prepare students for the world beyond school.

According to the findings, 46% of respondents agreed and 20% strongly agreed that professors in higher education had a responsibility to teach and prepare students for life after graduation. 10% of respondents disagreed with this statement, 12% strongly disagreed, and 12% were neutral. This implies that most individuals hold the opinion that a college education should give young adults the information and abilities they need to succeed in their particular industries. To succeed in any sector, they should also put an emphasis on developing soft skills like communication, problem-solving, and critical thinking. This data implies that higher education institutions should prioritize student education over research or other activities.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	4	8.0	8.0	8.0
	Disagree	5	10.0	10.0	18.0
	Neutral	7	14.0	14.0	32.0
	Agree	20	40.0	40.0	72.0
	Strongly Agree	14	28.0	28.0	100.0
	Total	50	100.0	100.0	

Table no. 5

The role of academics in Higher education is to study sources and create knowledge through research, teaching, or publications.

The data reveals that 40% of the respondents agreed and 28% strongly agreed that the role of academics in higher education is to study sources and create knowledge through research, teaching, or publications. 14% of respondents were neutral while 10% disagreed and 8% strongly disagreed with this statement. This suggests that most people understand the importance of academics in higher education and the importance of their research in creating new knowledge. It implies that higher education institutions should support academics by providing them with the necessary resources to carry out their work and should encourage them to engage in research activities. This can help create a collaborative environment where students, educators, and researchers can work together to create meaningful learning experiences.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	5	10.0	10.0	10.0
	Disagree	7	14.0	14.0	24.0

Neutral	9	18.0	18.0	42.0
Agree	20	40.0	40.0	82.0
Strongly Agree	9	18.0	18.0	100.0
Total	50	100.0	100.0	

Table no 6. Academics have been shown as providing a key source of innovation and change that educators need to use to implement these changes.

This data shows that 40% of the respondents agreed and 18% strongly agreed that academics have been shown as providing a key source of innovation and change that educators need to use to implement these changes. 10% of respondents strongly disagreed with this statement, 14% disagreed, and 18% were undecided. This implies that people recognize the importance of research and the potential of academics to bring about change within education. It suggests that higher education institutions should support and encourage academics in their research so that they can contribute to meaningful progress within the industry. Moreover, educators should use the insights gained from academics' research when creating strategies for implementing changes as well as developing curricula.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	2	4.0	4.0	4.0
	Disagree	4	8.0	8.0	12.0
	Neutral	6	12.0	12.0	24.0
	Agree	26	52.0	52.0	76.0
	Strongly Agree	12	24.0	24.0	100.0
	Total	50	100.0	100.0	

Table no 7. Academics are key in setting up practices that will benefit the society.

According to the statistics, 52% of respondents agreed with this statement, and 24% strongly agreed, suggesting that academics play a crucial role in establishing policies that would benefit society as a whole. 12% of respondents said they had no opinion, 8% disagreed, and 4% strongly disagreed. This implies that most people recognize the importance of academics and their research in creating meaningful change that can benefit society. Higher education institutions should support and encourage academics to engage in research activities, as their findings and insights could lead to innovative solutions that can improve our lives. Additionally, educators should try to include the most recent research into their lesson plans in order to help students develop a better awareness of the world and the ability to make a meaningful contribution to society.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	1	2.0	2.0	2.0
	Disagree	3	6.0	6.0	8.0
	Neutral	7	14.0	14.0	22.0
	Agree	27	54.0	54.0	76.0
	Strongly Agree	12	24.0	24.0	100.0
	Total	50	100.0	100.0	

Table no 8. Both educators and academics play a role in the improvement of the educational system in their jurisdiction

According to the statistics, 54% of respondents agreed with this statement, and 24% strongly agreed, that educators and academics both contribute to the progress of the educational system in their jurisdiction. With regard to this remark, 14% of respondents were indifferent, 6% disagreed, and 2% strongly disagreed. This suggests that most people recognize the importance of collaboration between educators and academics when it comes to improving the educational system. Higher education institutions should encourage collaboration between these two groups in order to create a more effective learning environment. Furthermore, educators should strive to incorporate academics' insights into their teaching practices and use research-based strategies when implementing changes. This will ensure that students can benefit from the latest research and be better prepared for success in the future. With these efforts, educators, academics, and researchers can work together to create meaningful learning experiences that can benefit all stakeholders in the educational system.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	1	2.0	2.0	2.0
	Disagree	3	6.0	6.0	8.0
	Neutral	4	8.0	8.0	16.0
	Agree	27	54.0	54.0	70.0
	Strongly Agree	15	30.0	30.0	100.0
	Total	50	100.0	100.0	

Table no 9. Both educators and academics encourage creativity, personal development, citizenship and social skills.

According to the findings, 54% of respondents agreed, with 30% strongly agreeing, that educators and academics should stimulate creativity, personal growth, civic engagement, and social skills. In contrast to the 6% who disapproved and the 2% who strongly objected, 8% of respondents were neutral. This implies that most people recognize the importance of fostering these skills in students through collaboration between educators and academics. Higher education institutions should encourage educators to collaborate with academics and use their research when developing curricula so that students can develop these important skills. Additionally, educators should strive to provide students with creative learning experiences that will allow them to gain a better understanding of the world around them and how they can contribute positively to society.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	1	2.0	2.0	2.0
	Disagree	3	6.0	6.0	8.0
	Neutral	4	8.0	8.0	16.0
	Agree	27	54.0	54.0	70.0
	Strongly Agree	15	30.0	30.0	100.0
	Total	50	100.0	100.0	

Table no 10. Academic institutions offer learning opportunities for life-long education that helps people advance their businesses, careers or professions when they are seeking a higher degree.

This data demonstrates that 54% of the respondents agreed and 30% strongly agreed that academic institutions offer learning opportunities for life-long education that helps people advance their businesses, careers, or professions when they are seeking a higher degree. 8% of participants were neutral while 6% disagreed and 2% strongly disagreed with this statement. This suggests that most people recognize the value of academic institutions in providing learning opportunities for life-long education. Higher education institutions should continue to offer programs that provide people with the opportunity to advance their businesses, careers or professions. Additionally, educators should strive to create a learning environment that encourages creativity and critical thinking so that students can gain a better understanding of the world around them and be better prepared for success in the future. With these efforts, academic institutions can help foster life-long learning and provide people with an opportunity to better their lives.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	1	2.0	2.0	2.0
	Disagree	3	6.0	6.0	8.0
	Neutral	7	14.0	14.0	22.0
	Agree	30	60.0	60.0	82.0
	Strongly Agree	9	18.0	18.0	100.0
	Total	50	100.0	100.0	

Table no 11. Both educators and academics share the responsibilities of defining programs for learning experiences that are both relevant and engaging.

This data indicates that 60% of the respondents agreed and 18% strongly agreed that both educators and academics share the responsibilities of defining programs for learning experiences that are both relevant and engaging. 14% of participants were neutral, while 6% disagreed and 2% strongly disagreed with this statement. This implies that most people understand the importance of collaboration between educators and academics when designing learning experiences for students. Higher education institutions should strive to create curricula

that are informed by both educators and academics, as this will help ensure that the programs offered are relevant and engaging for students.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	1	2.0	2.0	2.0
	Disagree	3	6.0	6.0	8.0
	Neutral	7	14.0	14.0	22.0
	Agree	31	62.0	62.0	84.0
	Strongly Agree	8	16.0	16.0	100.0
	Total	50	100.0	100.0	

Table no 12. Both educators and academics are instrumental in providing opportunities for students to learn about new and emerging technologies

This data suggests that 62% of the respondents agreed and 16% strongly agreed that both educators and academics are instrumental in providing opportunities for students to learn about new and emerging technologies. 14% of participants were neutral while 6% disagreed and 2% strongly disagreed with this statement. This indicates that most people recognize the importance of collaboration between educators and academics to provide students with the opportunity to learn about new and emerging technologies. Higher education institutions should make use of both educators' and academics' expertise to create curricula that will give students access to the most up-to-date technology knowledge and skills. With these efforts, academic institutions can help ensure that their graduates are well-prepared for success in the modern workplace.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	1	2.0	2.0	2.0
	Disagree	3	6.0	6.0	8.0
	Neutral	4	8.0	8.0	16.0
	Agree	26	52.0	52.0	68.0
	Strongly Agree	16	32.0	32.0	100.0
	Total	50	100.0	100.0	

Table no 13. Academics play a key role in initiating, promoting, and monitoring the effective management of higher education institutions.

This data indicates that 52% of the respondents agreed and 32% strongly agreed that academics play a key role in initiating, promoting, and monitoring the effective management of higher education institutions. 8% of participants were neutral, while 6% disagreed and 2% strongly disagreed with this statement. This implies that most people recognize the importance of academic involvement in the management of higher education institutions. Academic leaders should ensure that academics are given the opportunity to actively contribute to the decision-making process in order to maintain a high standard of quality and effectiveness in higher education institutions. With these efforts, academic institutions can continue to provide their students with an excellent educational experience.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	2	4.0	4.0	4.0
	Disagree	2	4.0	4.0	8.0
	Neutral	7	14.0	14.0	22.0
	Agree	27	54.0	54.0	76.0
	Strongly Agree	12	24.0	24.0	100.0
	Total	50	100.0	100.0	

Table no 14. Academic roles extend beyond teaching; they also include research, scholarship, writing, advising and specialising (in their area of expertise).

This data suggests that 54% of respondents agreed and 24% strongly agreed that academic duties involve work in research, scholarship, writing, advising, and specialisation in addition to teaching (in their area of expertise). 14% of participants were indifferent about this remark, 4% disagreed, and 4% strongly disagreed. This indicates that most people understand the importance of academic roles in providing a holistic education experience. Academic institutions should ensure that academics are given the opportunity to engage with their area of

expertise, as well as teaching, in order to provide students with a more comprehensive learning experience. With these efforts, academic institutions can help ensure that their graduates have developed a broad range of knowledge and skills which will prepare them for success in their chosen field.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	8	16.0	16.0	16.0
	Disagree	5	10.0	10.0	26.0
	Neutral	6	12.0	12.0	38.0
	Agree	20	40.0	40.0	78.0
	Strongly Agree	11	22.0	22.0	100.0
	Total	50	100.0	100.0	

Table no 15. Academics can play a particularly influential role in higher education institutions when they are strong advocates for change. According to the findings, 40% of respondents and 22% of them strongly agreed that academics may have a particularly significant influence on higher education institutions when they are ardent change agents. 16% of participants strongly disagreed with this statement, 10% disagreed, and 12% were indifferent.

This implies that most people understand the importance of academic advocacy in driving effective change in higher education institutions. Academic leaders should ensure that academics are given the appropriate space and opportunity to express their views to facilitate meaningful dialogue and a culture of open-mindedness. With these efforts, academic institutions can help ensure that initiatives are designed with the best interests of students, faculty, and staff in mind.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	3	6.0	6.0	6.0
	Disagree	6	12.0	12.0	18.0
	Neutral	3	6.0	6.0	24.0
	Agree	29	58.0	58.0	82.0
	Strongly Agree	9	18.0	18.0	100.0
	Total	50	100.0	100.0	

Table no 16. I have a positive outlook towards developing higher education in India to match international standards in the long run.

This data suggests that 58% of the respondents agreed and 18% strongly agreed that they have a positive outlook towards developing higher education in India to match international standards in the long run. 12% of participants disagreed and 6% were neutral with this statement, while 6% strongly disagreed. This indicates that most people are optimistic about the future of higher education in India. Academic leaders should ensure that they provide their students with a well-rounded education that includes both theoretical knowledge and practical skills which are applicable in the global marketplace. With these efforts, academic institutions can help facilitate the growth of a well-educated Indian population that can compete on an international level.

Testing of hypothesis
H1: Academicians contribute to the development of higher education.

The hypothesis was examined using a one sample T test. The Likert Scale was employed by the researcher to evaluate the academics' contribution to higher education. The one sample T-test revealed the following findings.

	Test Value = 3				95% Confidence Interval of the Difference	
	t	df	Sig. (2-tailed)	Mean Difference	Lower	Upper
Academicians will have to play a cruicial role in implementing the NEP 2020.	7.077	49	.000	.98000	.7017	1.2583
The role of educators in Higher education is to teach and prepare students for the world beyond school.	2.905	49	.005	.52000	.1603	.8797

The role of academics in Higher education is to study sources and create knowledge through research, teaching, or publications.	4.069	49	.000	.70000	.3543	1.0457
Academics have been shown as providing a key source of innovation and change that educators need to use to implement these changes	2.414	49	.020	.42000	.0703	.7697
Academics are key in setting up practices that will benefit the society as a whole	5.838	49	.000	.84000	.5509	1.1291
Both educators and academics play a role in the improvement of the educational system in their jurisdiction	7.229	49	.000	.92000	.6643	1.1757
Both educators and academics encourage creativity, personal development, citizenship and social skills	8.147	49	.000	1.04000	.7835	1.2965
Academic institutions offer learning opportunities for life-long education that helps people advance their businesses, careers or professions when they are seeking a higher degree	8.147	49	.000	1.04000	.7835	1.2965
Both educators and academics share the responsibilities of defining programs for learning experiences that are both relevant and engaging	7.093	49	.000	.86000	.6163	1.1037
Both educators and academics are instrumental in providing opportunities for students to learn about new and emerging technologies	7.056	49	.000	.84000	.6008	1.0792
Academics play a key role in initiating, promoting and monitoring the effective management of higher education institutions	8.212	49	.000	1.06000	.8006	1.3194
Academic roles extend beyond teaching; they also include research, scholarship, writing, advising and specialising (in their area of expertise)	6.678	49	.000	.90000	.6292	1.1708
Academics can play a particularly influential role in higher education institutions when they are strong advocates for change	2.165	49	.035	.42000	.0302	.8098

Table no 17. One-Sample Test

The above table shows that the mean differences are positive, and all are above 3.00. Thus, there is a general level of agreement as far as the role of the academicians in developing higher education is concerned. All the P values are below 0.05. This demonstrates that we may accept that **"Academicians contribute to the growth of higher education"** rather than the null hypothesis.

H2: The academicians have a positive outlook towards developing higher education in India to match international standards in the long run.

To determine whether the outcomes were the result of pure chance, a chi square test was utilised. The Chi Square Test's outcomes were as follows:

	Observed N	Expected N	Residual
Strongly Disagree	3	10.0	-7.0
Disagree	6	10.0	-4.0
Neutral	3	10.0	-7.0
Agree	29	10.0	19.0
Strongly Agree	9	10.0	-1.0
Total	50		

Table no 18. Positive outlook towards developing higher education in India to match international standards in the long run.

	I have a positive outlook towards developing higher education in India to match international standards in the long run
Chi-Square	47.600[a]
df	4
Asymp. Sig.	.000
a. 0 cells (0.0%) have expected frequencies less than 5. The minimum expected cell frequency is 10.0.	

Table no 19. Test Statistics.

The tables show that the P value is negligible and below 0.05. This helps us to understand that the results are not due to mere chance. It also helps is to reject the null hypothesis and accept that **"The academicians have a positive outlook towards developing higher education in India to match international standards in the long run."**

Conclusion

Overall, this survey indicates that most people understand the importance of academic roles in providing an excellent educational experience. Academic leaders should ensure that they give their academics the opportunity to engage with research, scholarship, writing and specialising in their respective fields. In addition, they should ensure that they create a culture of open-mindedness which encourages meaningful dialogue and encourages academics to be strong advocates for change. Finally, academic leaders should ensure that their students are given a well-rounded education which can compete on an international level. Academic institutions may contribute to ensuring that their graduates have the abilities and knowledge needed to prosper in the globalised world of today by making these efforts.

Academicians contribute to the development of higher education and have a positive outlook towards developing higher education in India to match international standards in the long run. By partnering with academic leaders, institutions can help ensure that initiatives are designed in the best interests of students, faculty, and staff. With these efforts, higher education in India can reach new heights of excellence and success.

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ROLE OF NEW EMERGING TECHNOLOGIES IN RECRUITMENT AND SELECTION PROCESS

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ABSTRACT
The recruitment and selection process has been revolutionized by the advent of new emerging technologies. These technologies have enabled employers to broaden their search for talent, shorten the time-to-hire and streamline administrative processes. This has allowed recruiters to focus more on candidate assessment and creating a better hiring experience. One of the most important technology advancements in recruitment is cloud computing. Cloud computing enables recruiters to access data quickly and easily, allowing them to make decisions faster. It also allows employers to store large amounts of data securely in one place, making it easier to analyze trends, identify areas for improvement and track results over time. Another major trend in recruitment today is artificial intelligence (AI). AI can automate mundane tasks such as screening resumes and conducting phone interviews, freeing up recruiters to focus on more important aspects of the hiring process. The current paper studies the role of new emerging technologies in recruitment and selection process. The current study is based on a survey conducted on 60 employees of the HR departments in IT organizations in Pune City, Maharashtra, India. The findings reveal that a majority of the respondents believed that new technologies they have made recruitment and selection process more efficient and cost-effective and that they have had a positive impact on the selection and recruitment processes.
Keywords: recruitment and selection process, cloud computing, artificial intelligence (AI), social media.

Introduction
The recruitment and selection process is one of the most important aspects of any organization, as it affects its performance and success. In today's ever-changing business environment, employers need to be agile and able to identify and hire the best talent quickly. This has been made easier by the introduction of new technologies such as cloud computing, artificial intelligence (AI) and social media. These advances have enabled recruiters to broaden their search for candidates, shorten the time-to-hire and streamline administrative processes while also creating a better hiring experience for job seekers.

Cloud Computing in Recruitment Cloud computing has revolutionized the way many organizations operate, including recruitment. It allows recruiters to store huge amounts of data securely in one place, making it easy to analyse trends and track results over time. It also makes data easily accessible, meaning recruiters can quickly access information from anywhere. This allows them to make decisions faster and ensure that the right candidates are hired for the role.

Artificial intelligence has allowed employers to automate mundane tasks such as screening resumes and conducting phone interviews, freeing up recruiters to focus on more important aspects of the hiring process. AI-driven tools can identify keywords in a candidate's resume or CV, which enables recruiters to find suitable candidates quickly and easily.

The use of social media platforms in recruiting is becoming increasingly common. Platforms such as LinkedIn have made it easier than ever before to find and connect with suitable candidates, regardless of location. Employers can also use social media to search for passive candidates who may not be actively looking for a job but could still be a great fit. New technologies such as cloud computing, artificial intelligence (AI) and social media have played an important role in revolutionizing the recruitment and selection process. These advances have enabled employers to broaden their search for talent, shorten the time-to-hire and streamline administrative processes while also creating a better hiring experience for job seekers.

The advantages of using emerging technologies in recruitment and selection process are as follows:

A. Use of Cloud Computing:
1. Easy to store and access data from anywhere
2. Ability to analyze trends and track results over time
3. Faster decision-making
4. Increased efficiency and cost savings

B. Use of Artificial Intelligence:
1. Automation of mundane tasks such as screening resumes
2. Identification of keywords in a candidate's resume/CV for quick search
3. Enables recruiters to focus on more important aspects of the hiring process

C. Use of Social Media Platforms:
1. Easier to find and connect with suitable candidates regardless of location
2. Search for passive candidates who may not be actively looking for a job but could still be a great fit.

In conclusion, it is clear that AI, cloud computing, and social media are playing increasingly important roles in modern recruitment practices and companies should invest in these technologies if they want to stay competitive in the current job market.

Review of Literature

Jain (2019) presents a comprehensive overview of the role of cloud computing and AI in recruitment. The author discusses how these technologies have revolutionized the way employers search for and hire candidates, with particular emphasis on the time-to-hire and administrative processes. In addition, the author considers the advantages that social media can bring to recruitment such as expanding the talent pool and connecting with passive candidates.

Dutta (2018) examines the use of artificial intelligence in recruitment, outlining how AI can improve efficiency, accuracy and cost savings for employers. The authors also address the ethical implications of using such technologies, particularly about data privacy and algorithmic bias. The results of the study indicate that AI can be an effective tool for employers to streamline the recruitment process and reduce hiring costs.

Sriram (2021) looks at the impact of social media on recruitment and selection processes. The author provides an overview of how employers use platforms like LinkedIn to recruit candidates, as well as the potential benefits and drawbacks of such practices. The essay also discusses the moral issues, such as data protection and privacy legislation that should be considered while utilising social media for recruiting. Overall, it is clear that emerging technologies such as cloud computing, AI and social media are playing an increasingly important role in modern recruitment. While these advancements can provide significant advantages to employers in terms of cost savings, time-to-hire and administrative processes, there are also ethical implications that should be addressed before implementing them. Moreover, it is important for employers to stay abreast of the latest technology developments and understand how they can be used to their advantage.

Harrier (2019) investigates how emerging technologies such as AI and cloud computing are being used in recruitment and selection processes. The author considers the advantages of these technologies, including faster decision-making, improved accuracy and cost savings. In addition, the article assesses potential ethical considerations when using such technologies in recruitment and selection, emphasizing the importance of data protection laws. Overall, it is clear that AI, cloud computing and social media are transforming the way employers search for, assess and hire candidates. These emerging technologies offer a number of advantages in terms of efficiency, cost savings and accuracy, but employers must also be aware of their ethical implications.

Shukla (2021) looks at the changing landscape of recruitment and selection in the digital age. The article provides an overview of how technology has revolutionized recruitment, from social networks to AI-driven algorithms. It also examines the potential benefits and drawbacks of using such technologies in recruitment, including cost savings, improved accuracy and time-to-hire. Finally, Shukla discusses ethical considerations for employers when utilizing such technologies, emphasizing the importance of data protection laws and avoiding algorithmic bias. Algorithmic bias is a serious ethical issue in recruitment and selection technology, as it can lead to unintentional discrimination in hiring decisions. Overall, the article highlights the need for employers to stay informed on the latest technological developments and understand both their advantages and potential ethical implications.

Singhania (2019) examines the role of AI in recruitment and hiring, outlining how it can be used to improve efficiency, accuracy and cost savings for employers. In conclusion, Singhania argues that while AI has great potential to revolutionize recruitment processes, employers must consider the ethical implications before implementing such technologies.

Kulkarni (2018) investigates the effects of AI and cloud computing on recruitment processes. The authors give a general overview of how these technologies might be applied to automate various recruiting process steps, including resume screening, applicant search, and skills evaluation. They also discuss potential ethical considerations that should be considered when implementing such technologies. The results of their study show that while AI and cloud computing can offer great advantages to employers, there are also ethical implications that should be addressed. Overall, emerging technologies such as AI, cloud computing and social media are playing an increasingly important role in modern recruitment processes. While these advancements can provide significant advantages to employers in terms of cost savings, time-to-hire and administrative processes, there are also ethical considerations that must be considered before implementing them. The author stresses that the employers must stay abreast of the latest developments in recruitment technology and understand how these advancements can be used.

Aheer (2019) explores the implications of AI for employment and recruitment in the digital economy. The article covers how AI may be applied to the hiring process to automate tasks like resume screening, applicant search, and skills evaluation. It also outlines potential ethical considerations that should be taken into consideration when implementing these technologies, including data privacy laws and algorithmic bias.

Jayraman (2016) examines the implications of AI for recruitment processes in India. The author discusses how AI may be applied to the recruiting process to automate tasks like resume screening, applicant search, and skills evaluation. They also discuss potential ethical considerations that should be considered when implementing such technologies, including data privacy laws and algorithmic bias. Additionally, they provide a case study on an Indian company using AI and machine learning to improve its recruitment process. The results of their study show that while AI can offer great advantages to employers in terms of cost savings, time-to-hire and accuracy of decisions made, there are also ethical implications that must be addressed before implementing such technologies. In conclusion, Jayraman (2016) argues that while advances in technology have made recruitment processes more efficient, employers must also be aware of the potential ethical implications that come with using AI in their recruitment processes. Overall, emerging technologies such as AI, cloud computing and social media are transforming the way employers recruit new talent. While these advancements offer several advantages in terms of efficiency and cost savings, there are also ethical considerations associated with their use that must be taken into account.

Soonawala (2019) examines how AI and predictive analytics can be used to improve the accuracy of recruitment decisions. The author discusses the potential benefits of such technology, including improved speed and accuracy in resume reviews, more targeted job advertisements, increased diversity in hiring practices, and reduced bias in selection decisions.

Raman (2020) offers a comprehensive look at how AI is transforming recruiting practices today and what challenges employers must consider before implementing such technologies. They highlight key topics such as data privacy, ethical decision-making, and algorithmic bias. The author also offers tips on how employers can ensure their recruitment processes are compliant with data protection laws and ethically sound. Ultimately, this article provides a valuable resource for employers looking to understand the potential risks and benefits associated with using AI in recruitment processes so that they may make informed decisions about its use. In summary, it is clear that advances in technology have transformed recruiting practices today; however, employers must be aware of the potential ethical implications associated with their use.

Objectives of the study
1. To understand the role of new emerging technologies in recruitment and selection process
2. To analyse the impact of new technologies on recruitment efficiency and cost-effectiveness

Hypotheses
H1: There is a positive impact of new emerging technologies on recruitment and selection process.

Methodology
A survey was conducted with 60 employees from the HR departments of 10 leading IT organizations in Pune City, Maharashtra, India. The survey used closed-ended questions to gather information related to the role of

new technologies in their respective companies' recruitment and selection process. Following the collection of the data, descriptive statistics like frequencies, percentages, and mean scores were used to examine it. Responses were collected using a Likert scale for agreement, where 1 represented a strong disagreement and 5 represented a strong agreement. The data analysis process was carried out using SPSS version 24.

Results
Data Analysis

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	18-30 years	3	5.0	5.0	5.0
	31-40 years	15	25.0	25.0	30.0
	41-50 years	27	45.0	45.0	75.0
	51-60 years	15	25.0	25.0	100.0
	Total	60	100.0	100.0	

Table 1. Age

From the above table we can see that the majority of respondents (45%) were aged between 41-50 years old, followed by 25% each for 18-30 years old and 51-60 years old. This indicates that the survey has a good representation from different age groups.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	28	46.7	46.7	46.7
	Female	32	53.3	53.3	100.0
	Total	60	100.0	100.0	

Table 2. Gender

From the above table we can see that the majority of respondents (53.3%) were female, followed by 46.7% male. This indicates that the survey has a good representation from both genders.
Impact of new technology on the various aspects of recruitment and selection processes.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	8	13.3	13.3	13.3
	Disagree	4	6.7	6.7	20.0
	Neutral	8	13.3	13.3	33.3
	Agree	4	6.7	6.7	40.0
	Strongly Agree	36	60.0	60.0	100.0
	Total	60	100.0	100.0	

Table 3. The use of new emerging technologies in recruitment and selection process has improved the efficiency of the process.

According to the above data, 60% of respondents strongly agreed that using new developing technologies in the recruiting and selection process had increased the process' efficiency. 6.7% of the people surveyed agreed. Neutral responders made up 13.3% of the total. 6.7% and 13.3% of respondents, respectively, disagreed and strongly disagreed that the recruiting and selection process has become more efficient as a result of the adoption of new developing technologies. It demonstrates that the majority of respondents thought that the effectiveness of the recruiting and selection process had increased as a result of the adoption of new developing technologies.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	8	13.3	13.3	13.3
	Disagree	4	6.7	6.7	20.0
	Neutral	1	1.7	1.7	21.7
	Agree	5	8.3	8.3	30.0

Strongly Agree	42	70.0	70.0	100.0
Total	60	100.0	100.0	

Table 4. The use of new emerging technologies in recruitment and selection process has increased cost-effectiveness

According to the above figure, 70% of respondents firmly agreed that the use of new, developing technologies in the recruiting and selection process has boosted cost-effectiveness. 8.3% of the people surveyed concurred. Neutral responders made up 1.7% of the total. Regarding whether new developing technologies in the recruiting and selection process have boosted cost-effectiveness, 6.7% and 13.3% of respondents disagreed, respectively. It demonstrates that the majority of respondents thought that emerging technologies had improved cost-effectiveness in the recruiting and selection process.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	1	1.7	1.7	1.7
	Neutral	1	1.7	1.7	3.3
	Agree	14	23.3	23.3	26.7
	Strongly Agree	44	73.3	73.3	100.0
	Total	60	100.0	100.0	

Table 5. AI is beneficial for automated tasks such as resume screening,

From the above table we can observe that 73.3% of the respondents strongly agreed that AI is beneficial for automated tasks such as resume screening, candidate interviewing and background checks. 23.3% of the respondents agreed to the same. 1.7% of respondents were indifferent, and 1.7% strongly disagreed that AI was useful for automating duties like background checks, applicant interviews, and resume screening. It shows that the majority of the respondents believed that AI is beneficial for automated tasks such as resume screening, candidate interviewing and background checks.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	10	16.7	16.7	16.7
	Disagree	7	11.7	11.7	28.3
	Neutral	5	8.3	8.3	36.7
	Agree	7	11.7	11.7	48.3
	Strongly Agree	31	51.7	51.7	100.0
	Total	60	100.0	100.0	

Table 6. Candidate interviewing has become faster due to the use of emerging technology

From the above table we can see that 51.7% of the respondents strongly agreed that candidate interviewing has become faster due to the use of emerging technology. 11.7% of the respondents agreed to the same, 8.3% were neutral and 16.7% of the respondents strongly disagreed and 11.7% disagreed that candidate interviewing has become faster due to the use of emerging technology. It demonstrates that the majority of respondents thought that the usage of cutting-edge technology had sped up candidate interviews.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	9	15.0	15.0	15.0
	Disagree	7	11.7	11.7	26.7
	Neutral	7	11.7	11.7	38.3
	Agree	6	10.0	10.0	48.3
	Strongly Agree	31	51.7	51.7	100.0
	Total	60	100.0	100.0	

Table 7. Social media platforms are useful to identify potential candidates.

From the above table we can see that 51.7% of the respondents strongly agreed that social media platforms are useful to identify potential candidates. 10% of the respondents agreed to the same, 11.7% were neutral and 15% of the respondents strongly disagreed and 11.7% disagreed that social media platforms are useful to identify

potential candidates. It shows that the majority of the respondents believed that social media platforms are useful to identify potential candidates

		Frequency	Percent	Valid Percent	Cumulative Percent
alid	Strongly Disagree	5	8.3	8.3	8.3
	Disagree	12	20.0	20.0	28.3
	Neutral	7	11.7	11.7	40.0
	Agree	6	10.0	10.0	50.0
	Strongly Agree	30	50.0	50.0	100.0
	Total	60	100.0	100.0	

Table 8. Cloud computing helps in storing large amounts of data securely.

From the above table we can see that 50% of the respondents strongly agreed that cloud computing helps in storing large amounts of data securely. 10% of the respondents agreed to the same, 11.7% were neutral and 20% of the respondents strongly disagreed and 8.3% disagreed that cloud computing helps in storing large amounts of data securely. It shows that the majority of the respondents believed that cloud computing helps in storing large amounts of data securely.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	7	11.7	11.7	11.7
	Disagree	7	11.7	11.7	23.3
	Neutral	5	8.3	8.3	31.7
	Agree	3	5.0	5.0	36.7
	Strongly Agree	38	63.3	63.3	100.0
	Total	60	100.0	100.0	

Table 9. Big data analysis can help in identifying suitable candidates.

From the above table we can see that 63.3% of the respondents strongly agreed that big data analysis can help in identifying suitable candidates. 5% of the respondents agreed to the same, 8.3% were neutral and 11.7% of the respondents strongly disagreed and 11.7% disagreed that big data analysis can help in identifying suitable candidates. It shows that the majority of the respondents believed that big data analysis can help in identifying suitable candidates.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	13	21.7	21.7	21.7
	Disagree	6	10.0	10.0	31.7
	Neutral	5	8.3	8.3	40.0
	Agree	7	11.7	11.7	51.7
	Strongly Agree	29	48.3	48.3	100.0
	Total	60	100.0	100.0	

Table 10. The use of new technologies have increased the accuracy of the recruitment and selection process.

From the above table we can see that 48.3% of the respondents strongly agreed that the use of new technologies have increased the accuracy of the recruitment and selection process. 11.7% of the respondents agreed to the same, 8.3% were neutral and 21.7% of the respondents strongly disagreed and 10% disagreed that the use of new technologies have increased the accuracy of the recruitment and selection process. It shows that the majority of the respondents believed that the use of new technologies have increased the accuracy of the recruitment and selection process.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	11	18.3	18.3	18.3
	Disagree	12	20.0	20.0	38.3
	Neutral	4	6.7	6.7	45.0

		Frequency	Percent	Valid Percent	Cumulative Percent
	Agree	9	15.0	15.0	60.0
	Strongly Agree	24	40.0	40.0	100.0
	Total	60	100.0	100.0	

Table 11. Use of emerging technologies has resulted in improved quality of feedback given to candidates

We can observe from the above table that 40% of respondents strongly concurred that using new technologies has increased the calibre of feedback provided to applicants. 15% of respondents agreed, 6.7% were indifferent, 20% strongly opposed, and 18.3% disputed that the usage of developing technologies had enhanced the calibre of feedback provided to applicants. It demonstrates that the majority of respondents thought that the usage of new technologies had enhanced the standard of feedback provided to applicants.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	9	15.0	15.0	15.0
	Disagree	14	23.3	23.3	38.3
	Neutral	4	6.7	6.7	45.0
	Agree	9	15.0	15.0	60.0
	Strongly Agree	24	40.0	40.0	100.0
	Total	60	100.0	100.0	

Table 12. The use of new emerging technologies decreases the time and effort required for recruitment and selection process

According to the above data, 40% of respondents strongly agreed that using new, developing technologies will cut down on the time and effort needed for the recruiting and selection process. In comparison, 6.7% of respondents were indifferent, 23.3% strongly opposed, and 15% disagreed with the statement that the adoption of new developing technologies reduces the time and effort needed for the recruiting and selection process. Only 15% of respondents agreed with this statement. It demonstrates that the majority of respondents thought that the time and effort needed for the recruiting and selection process will be reduced with the usage of new developing technologies.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	14	23.3	23.3	23.3
	Disagree	4	6.7	6.7	30.0
	Neutral	7	11.7	11.7	41.7
	Agree	4	6.7	6.7	48.3
	Strongly Agree	31	51.7	51.7	100.0
	Total	60	100.0	100.0	

Table 13. The use of social media platforms, for example Linked In, is beneficial for employers to identify potential candidates

From the above table we can see that 51.7% of the respondents strongly agreed that the use of social media platforms, for example Linked In, is beneficial for employers to identify potential candidates. 6.7% of the respondents agreed to the same, 11.7% were neutral and 23.3% of the respondents strongly disagreed and 6.7% disagreed that the use of social media platforms, for example Linked In, is beneficial for employers to identify potential candidates. It shows that the majority of the respondents believed that the use of social media platforms, for example Linked In, is beneficial for employers to identify potential candidates.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	10	16.7	16.7	16.7
	Disagree	8	13.3	13.3	30.0
	Neutral	6	10.0	10.0	40.0
	Agree	9	15.0	15.0	55.0
	Strongly Agree	27	45.0	45.0	100.0
	Total	60	100.0	100.0	

Table 14. Use of social media platforms helps employers to get information regarding job seekers with prior employers

We can see from the above table that 45% of respondents strongly agreed that using social media platforms helps companies learn more about job applicants' previous employment. 15% of respondents agreed, 10% were indifferent, 13.3% strongly objected, and 16.7% disagreed that using social networking sites to gather information about job applicants' previous employers is helpful for companies. It demonstrates that the majority of respondents thought that using social media platforms helped companies learn more about job applicants' previous employers.

Testing of hypothesis
H1: There is a positive impact of new emerging technologies on the recruitment and selection process.

	N	Mean	Std. Deviation	Std. Error Mean
1. The use of new emerging technologies in recruitment and selection process has improved the efficiency of the process.	60	3.9333	1.49425	.19291
2. The use of new emerging technologies in recruitment and selection process has increased cost-effectiveness	60	4.1500	1.48238	.19137
3. AI is beneficial for automated tasks such as resume screening,	60	4.6667	.68064	.08787
4. Candidate interviewing has become faster due to the use of emerging technology	60	3.7000	1.58702	.20488
5. Social media platforms are useful to identify potential candidates.	60	3.7167	1.55238	.20041
6. Cloud computing helps in storing large amounts of data securely.	60	3.7333	1.45982	.18846
7. Big data analysis can help in identifying suitable candidates.	60	3.9667	1.50667	.19451
8. The use of new technologies have increased the accuracy of the recruitment and selection process.	60	3.5500	1.66138	.21448
9. Use of emerging technologies has resulted in improved quality of feedback given to candidates	60	3.3833	1.60604	.20734
10. The use of new emerging technologies decreases the time and effort required for recruitment and selection process	60	3.4167	1.56543	.20210
11. The use of social media platforms, for example Linked In, is beneficial for employers to identify potential candidates	60	3.5667	1.69112	.21832
12. Use of social media platforms helps employers to get information regarding job seekers with prior employers	60	3.5833	1.56543	.20210

Table 15. One-Sample Statistics

The above table shows that mostly, the mean values are greater than 3.5. The survey has revealed some important insights regarding the use of new emerging technologies in recruitment and selection process.

	Test Value = 3					
					95% Confidence Interval of the Difference	
	t	df	Sig. (2-tailed)	Mean Difference	Lower	Upper
1. The use of new emerging technologies in recruitment and selection process has improved the efficiency of the process.	4.838	59	.000	.93333	.5473	1.3193
2. The use of new emerging technologies in recruitment and selection process has increased cost-effectiveness	6.009	59	.000	1.15000	.7671	1.5329
3. AI is beneficial for automated tasks such as resume screening,	18.967	59	.000	1.66667	1.4908	1.8425
4. Candidate interviewing has become faster due to the use of emerging technology	3.417	59	.001	.70000	.2900	1.1100
5. Social media platforms are useful to identify potential candidates.	3.576	59	.001	.716	.3156	1.1177

6. Cloud computing helps in storing large amounts of data securely.	3.891	59	.000	.73333	.3562	1.1104
7. Big data analysis can help in identifying suitable candidates.	4.970	59	.000	.96667	.5775	1.3559
8. The use of new technologies have increased the accuracy of the recruitment and selection process.	2.564	59	.013	.55000	.1208	.9792
9. Use of emerging technologies has resulted in improved quality of feedback given to candidates	1.849	59	.069	.38333	-.0316	.7982
10. The use of new emerging technologies decreases the time and effort required for recruitment and selection process	2.062	59	.044	.41667	.0123	.8211
11. The use of social media platforms, for example Linked In, is beneficial for employers to identify potential candidates	2.596	59	.012	.56667	.1298	1.0035
12. Use of social media platforms helps employers to get information regarding job seekers with prior employers	2.886	59	.005	.58333	.1789	.9877

Table One-Sample Test

Most of the factors listed above have their P values less than 0.05. With this, we can confidently rule out the null hypothesis and believe that new developing technologies have a beneficial effect on the recruiting and selection process.

Conclusion

The majority of respondents agreed that the use of new emerging technologies has improved the efficiency, cost-effectiveness, accuracy, and quality of feedback given to candidates. Overall, this survey reveals that there is an increasing acceptance in the use of new emerging technologies for the recruitment and selection process by job seekers. Furthermore, the use of social media platforms, such as LinkedIn, is beneficial for employers to identify potential candidates and get information regarding job seekers with prior employers.

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ROLE OF SELF -EFFICACY IN RELATION TO PERCEIVED ORGANIZATIONAL SUPPORT AND EMPLOYEE ENGAGEMENT

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ABSTRACT
The goal of the study was to determine the strength of the link between employee engagement and perceived organisational support, as well as the mediation role of self-efficacy. Data from the workers in the manufacturing and service sectors were gathered using a self-administered report for this descriptive cross-sectional study. According to the study's findings, an employee's impression of support has a favourable impact on how engaged they are at work. In addition, research shows that self-efficacy modulates the link between employee engagement and perceived organisational support. This study shows that corporate support increases employee engagement and boosts confidence.
Keywords: Perceived Organizational Support (POS), Employee Engagement, and Self-efficacy.

Introduction
In today's competitive world, leveraging the work engagement of employees will be considered as the main strategy of an organization. Employee engagement has many paybacks to the firm such as increase in profit, productivity, reduced cost, better employee retention, lowering the absenteeism, improved employee and organizational performance. (Sungmala, Verawat (2021); Ahmed (2020); Saks (2006)). Engagement and employee engagement are concepts that are used interchangeably in academic research. Engaged employee shows involvement, high level of energy, dedication, enthusiasm at the workplace and is more focused (Schaufeli, 2013). Work engagement was described by Schaufeli (2002) as "a good, rewarding state of mind that is marked by vitality, devotion, and immersion" (p. 74). The little research was done on demographic factors as antecedents for employee engagement (Banihani, 2013; Svensson, 2020). Employee engagement is considered as a part of positive organization behaviour (POB) construct (Jeuang, 2011).

According to a recent Gallup's study, globally only 20% of employees are engaged at the workplace. Employee engagement creates competitive advantage for organizations (Rich, 2010). Engaged employee's behaviour reflects the employee-organization affiliation. Engaged employees are happy and effective at the workplace (Gupta 2017). Employees who are more engaged are more innovative, productive, enthusiastic and engrossed towards their work (Bhatnagar 2012, Schaufeli, 2008). The engagement of survivors of downsized firms can be boosted with the help of talent development strategies and these employees could act as brand representatives of the organization (Tiwari, & Lenka, 2020). As employee engagement has different potential advantages for achieving organizational goals, recently academic research paid more attention on identifying contextual and personal resources which enrich or restrict the engagement of employees. Not only do organizations benefit out of engagement of employees but to the individual employee as well. Positive outcome of engagement to the individual employee is psychological, and physiological well-being (Gupta. 2016).

In today's talent economy, job demands - resources (JD-R) theory and Social Exchange (SE) theory are dominant in employee engagement research. As per these thoughts, the personal and organization resources are the key ingredients in the employee engagement. Researchers tried to tie the threads of these theories in the current research and investigated the role of Perceived organizational support (Organizational resource) as antecedent and self-efficacy (personal resource) as mediator in boosting the employee engagement.

Nowadays the organizational workforce is diverse, multigenerational and digitally oriented who expect a flexible and employee centric environment to recharge their engagement. Organizations try to provide conducive support and opportunities to their employees for the development of psychological strength which lead to high engagement of employees. Self-efficacy of employees is a significant predictor of adjustment and the degree to which employees use affective behavioural strategies. Self-efficacy is considered as a significant individual resource at workplaces that might provide an intrinsic motivation (Cetin, 2019).

This study examines the role of self-efficacy as mediator in relation between perceived organizational support and employee engagement. Researchers tried to study based on previous research that includes perceived organizational support and self-efficacy as inputs, which result in employee engagement as outcome. This research model was examined among the white-collar employees in India. In today's work environment retaining highly engaged employees is very imperative. This study would definitely be helpful to managers and management for more attention on the working environment.

Literature Review

Self-efficacy is an employee's personal resource positively affecting the role perception which in turn helps the employees to demonstrate work life balance and work engagement (Chan 2017). Perceived organizational support helps the employee to reinforce self-confidence and belief (Caesens & Stinglhamber, 2014). POS reinforces the employee's self-efficacy which leads to more engagement at the workplace (Eisenberger & Stinglhamber, 2011). Arifin., (2021) argued that self-efficacy is the main contributor in improving the performance of employees and realizing employee engagement. Albrecht (2023) stated that self-efficacy can serve as a psychological pre-condition for change management, change engagement and proactive work behaviour. Self-efficacy creates the positive energy which results in motivation to positive work behaviour (Ullah, 2021).

Perceived organizational support not only induces cohesion among the employees but also agreement on the way of task performance (Caesens, 2019). POS increases workplace positive attitudes and behaviours such as commitment, in role performance (Arshadi, 2011), job satisfaction (Maan,2020) , innovative work behaviour (Agarwal, 2014), citizenship behaviour (Singh & Srivastava 2016), employee performance (Sungu, 2019) , employee engagement (Imran, 2020) as well as decreases turnover intention (Wang & Wang 2020), and burnout (Cropanzano , 1997). POS creates the belief among the employees that organizations trust them consequently employees engage in optimal risk taking behaviour (Neves & Eisenberger 2014).

Engaged employee is considered to be an ambassador of the company all the time (Chandani, 2016). Engaged employees fully provide their physical, emotional and intellectual inputs to their job and which can be influenced majorly by organizational, job and personal resources (Sun, 2019). Many empirical studies were carried out to predict the employee engagement and the antecedents of employee engagement were discovered as leadership, job characteristics, supervisor support, procedural and distributive justice, personal resources (Saks., 2019), management behaviour, compensation (Rattan pun, 2022).

Methodology

The objectives of the research were

1. To study the influence of perceived organizational support on engagement of employees.
2. To analyse the effect of self-efficacy on employee engagement.
3. To check mediation effect of self-efficacy for the relation perceived organizational support and employee engagement

Theoretical framework of research

A descriptive research design was adopted to carry out research. Through a purposeful sampling method data was collected from the employees of manufacturing and service sector employees of Maharashtra state, India. A structured questionnaire was designed as an instrument of data collection. Total 428 employees were contacted through email and social media for data collection and 357 complete questionnaires were received.
Theoretical Model is presented in Figure 1:
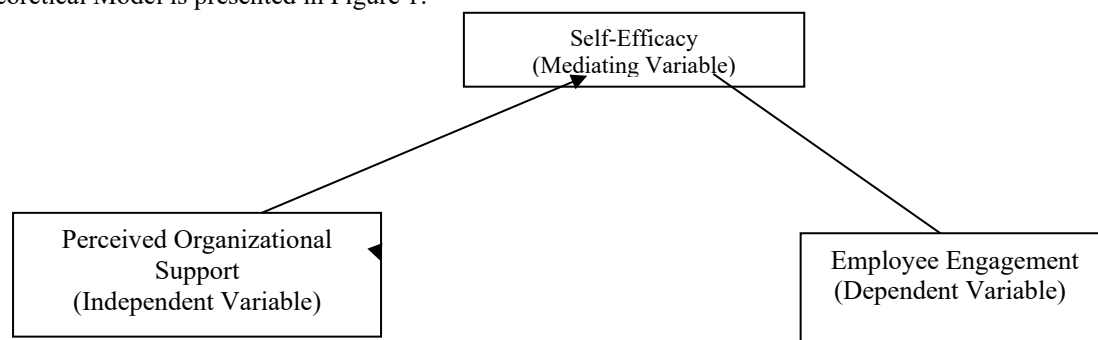
Figure1: Model

Research Instrument

7-point Employee engagement, self-efficacy, and perceived organisational support are all measured using the Likert scale. Scale scores for POS and self-efficacy are 1 for strongly disagree, 2 for disagree, 3 for somewhat disagree, 4 for neutral, 5 for somewhat agree, 6 for agree, and 7 for strongly agree.
Three items were used to measure POS (Rhoades, 2001). Internal consistency of POS was 0.872. Short versions of self-efficacy scale of 7 items were used and reliability of the same was 0.84. Similarly, the nine item scale of

UWES for measuring employee engagement was utilized using a 7 point Likert scale ranging from 1 to 7 (1: Never and 7: always). The internal consistency of the employee engagement scale was 0.891.

Data Analysis

In the present study researchers tested mediation analysis. Hayes (2012) SPSS PROCESS Macro model was carried out to test the hypothesis. Table 1 shows descriptive statistics, reliability and correlations. The data indicated that there is strong correlation between Perceived Organizational Support, Self-efficacy and Employee Engagement. Each of these have reliability more than 0.80, it indicates the good internal consistency of the scale.

Variable	Mean	S.D.	POS	SE	EE
POS	4.57	1.29	(0.872)		
SE	4.83	0.85	0.342**	(0.84)	
EE	5.03	1.32	0.472**	0.503**	(0.891)

Table 1: Descriptive Statistics, Reliability and Correlations

Correlation is significant at 1% level of significance.
It indicates there is significant correlation between POS and SE; POS and EE and SE and EE.

Table 2 shows that perceived organizational support was a significant influencer of self-efficacy of employees as $\beta = 0.284$ and $p < 0.001$. This variable explained 18 percent of variance in self efficacy ($R^2 = 0.178$). Along with this, self-efficacy significantly predicts the engaged behaviour of employees ($\beta = 0.581$, and $p < 0.001$). Additionally, organizational resource POS was a significant predictor of employee engagement as $\beta = 0.521$, and $p < 0.001$. Perceived organizational support explained 32.4% variance in the engaged employee behaviour.

Moreover, the indirect effect of perceived organizational support on employee engagement via self-efficacy was found to be significant with 95% Confidence interval (0.0802, 0.2469). It supports the mediation effect hypothesis.
The direct effect of perceived organizational support on employee engagement is $\beta = 0.521$ ($p < 0.001$) which is also significant with 95 % confidence interval from 0.231 to 0.641.

	β	*SE*	t	p	
Perceived Organizational Support → Employee Engagement	0.521	0.038	2.213	P < 0.001	
Perceived Organizational Support → Self Efficacy	0.284	0.026	5.251	P < 0.001	
Self-Efficacy → Employee Engagement	0.581	0.036	5.917	P < 0.001	
Indirect effect	Effect	SE	LL	UL	p
Perceived Organizational Support → Self Efficacy → Employee Engagement	0.165	0.027	0.0802	0.2469	P < 0.001

Table 2. Bootstrapping results for direct and indirect effects.

The total effect is measured by total direct and indirect effect. The total perceived organizational support effect on employee engagement is 0.686 (0.521+0.165) (Hayes, 2013).
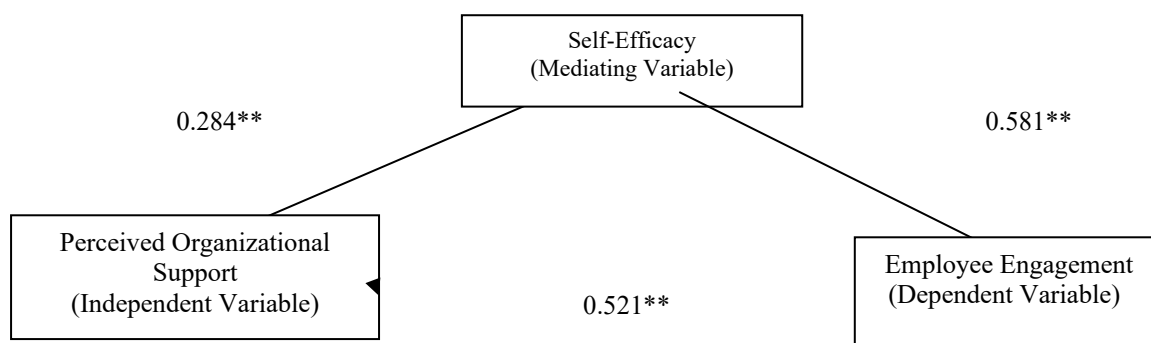
Discussion and Conclusion

The current study investigates how employee engagement is influenced by perceived organisational support. The results confirm other studies' conclusions that employee engagement is favourably influenced by self-efficacy and perceived organisational support (Musenze, 2022; Caesens & Stinglhamber 2014; Al-Hamdan 2022). The outcomes also confirm the findings of Musenze (2021), Caesens & Stinglhamber (2014) that self-efficacy mediates the link between employee engagement and perceived organisational support.

The theoretical contribution of this research leads to valuable implications to the existing employee engagement literature particularly in the Indian context. The practical implication of the study suggests that organizations with employee supportive environments make their employees self-confident which in turn create innovative, energetic and engrossed employees. The study concludes that organizational resources as well as personal resources play a significant role for that employee to be enthusiastic and energetic at the workplace.

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SIGNIFICANCE OF CORPORATE COMMUNICATION AT WORKPLACE AND ITS IMPACT ON EMPLOYEE ENGAGEMENT

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ABSTRACT
Success of any organization can be significantly impacted by communication, which is an effective instrument. Employee engagement, workplace productivity, and corporate growth can all be enhanced by effective communication. A productive workforce is built on effective communication. The most important investment a company makes is in its employees, who ultimately make the difference between the firm succeeding or failing. Engaged employees are more devoted and loyal, which is necessary for the success of goals and the success of the company. The purpose of this study is to investigate the relationship between employee engagement and communication.
Keywords: Corporate communication, Employee engagement,

Introduction

One of the concepts that is increasingly used to describe how corporations attempt to cooperate with stakeholders is engagement. Researchers have found that there are currently more disengaged workers than engaged staff, which is alarming. Only 13% of employees surveyed for Gallup's State of the Global Workplace report say they feel engaged at their place of employment (Gallup, 2016) Employee engagement is the level of commitment to the company, enthusiasm for one's work, and extra effort put forth by employees. Employee engagement is a professional method that fosters an environment where each employee is motivated and empowered to provide their all throughout the day, committed to the aspirations and values of an organization, eager to participate in its success, and getting positive concerning their own well-being.

Any information provided within a corporation for professional objectives is often referred to as internal communication. The phrase is most frequently used to describe a person or division in charge of employee communications. Employees are updated on the goals and strategies of the organisation, and they are informed and involved. While a specialised appropriate communication department is clearly needed in large enterprises, managers or HR frequently handle this function in smaller businesses. TCS in their integrated report of 2021-2022 mention that "After the outbreak erupted, the requirement for participative management became imperative. In these unsettling times, we increased work engagement."
Internal communication is the process by which company and their staff exchange information, whether it be vocally, in writing, or remotely. Internal communication is the foundation of a successful company, even though outward communication with customers, clients, and the broader public is crucial. To encourage employees to perform their duties efficiently and adequately, information about the organization is disseminated internally. It keeps people alert. Furthermore, it works among employees who are communicating to one another at the workplace. Internal communication that succeeds fosters corporate culture and raises staff morale. Building a cooperative spectrum involves effective communication with staff. It's not as difficult to develop such communication as one may believe. To adopt the proper communication enhancers, all that is needed is an awareness of the nature of the workplace. Communication with employees is vital because it provides your workers a voice and helps them feel appreciated, a sense of belonging, and increased productivity.

Review of Literature

Internal communication benchmarks give us a brief, comprehensible description of the organization's current state and an outlook for where it will be in the not-too-distant future. Internal communication promotes cultural diversity and is employee-centered to enhance and diversify employee engagement. (Ishtiaque and Habib, 2016) Corporate communication now plays a crucial role in an organization's ability to succeed, especially in the service industries where the goal is to gain and maintain a competitive edge while also implementing the needed organisational changes. (Sharma, Neha & Kamalanabhan, 2012) Internal communication's tone and timeliness have a significant impact on the way an organisation conducts itself, but it also has an impact on and engages its workforce. One of the most crucial issues that organisations confront because of the increased dynamic nature of the market is connecting with people physiologically, cognitively, socially, and logically for both individual and corporate success (Vora & Patra, 2017). To affect employee engagement through internal communication,

organisational leaders should take advantage of identification, specifically perceptions of value and pride. In other words, for employees to be engaged, they need to gain awareness of their group membership and attach value and emotional meaning to it (Karanges, 2014). Employee engagement and communication processes typically have a significant positive association (Balakrishnan & Masthan, 2013). It is important for organisations to emphasise their internal communication strategy, particularly to inspire entry-level employees (Chamindi, T.D.K.H. and Welmilla, 2015) Organizations can encourage people by starting with needs, that can develop into goals and actions, that may then lead to motivation, which may eventually result in organisational goals, using professional growth and internal communication (Panjaitan & Septiana, 2020).

Objective of the study
1. To comprehend how corporate communication is used in the workplace.
2. To comprehend how business communication affects employee engagement.

Corporate communication and Employee Engagement
Creating the ideal environment for all company members to offer their best effort each day is part of fostering employee engagement. These factors are necessary to develop employees' commitment to the objectives and values of their organisation, as well as their motivation and sense of well-being, to contribute to organisational success. Thus, a person's physical, intellectual, and psychological aspects are related to their level of employee engagement. As a result, effective internal communication has a significant impact on these factors at work and raises employee engagement.

Organizations that want to hire and keep bright employees should be aware of how internal communications affect employee engagement. This can be accomplished by offering additional channels for communication, more training courses, and behaviours that promote connection, trustworthiness, awareness, and cognitive. The inability to communicate could be the most common problem, whether in big or small organizations. No matter the position they hold within the organisation, most staff will say that interaction is an issue that needs improvement. Effective communication satisfies these requirements by keeping all staff members kept up to date on work functions. The workforce interprets the communication as a representation of their relative significance to the organisation. If they are routinely and directly informed about crucial subjects, they can engage in company activities in an efficient manner. Internal communication helps employees improve their business understanding by giving them better guidance, improves their leadership abilities, and gains employee support for organisational transformation (Ishtiaque and Habib, 2016). Employees that experience a sense of value tend to be more productive, more independent, and frequently more eager to contribute to innovation. From a practical standpoint, organisational leaders and supervisors should direct internal communication away from utilising it to directly influence employee engagement toward enhancing identification with the organisation and perceived organizational support from the supervisor (Karanges, 2014). Fig 1 shows that employee engagement is listed as the top significance of internal communications experts.

Fig. 1 Factors affected by corporate communication with employees. [*Source: Yvonne Harris, 2021*]

According to Santiago (2020), Employee engagement is fostered via good internal communication, which is essential for business success. The main causes of employee leaving are frequently connected to communication. A lack of clear guidance from management, a general lack of communication throughout the organization, or ongoing change that is poorly conveyed are all examples of poor communication. (Cowie, 2019). According to Karanges (2015), internal organisational communication and internal supervisor communication are crucial for creating and sustaining the highest levels of employee engagement. By

developing a culture of effective internal communication not only at the management and colleague groups, but a business can also increase the organisational loyalty of its employees (Qin & Men, 2022).

Findings & Discussions

The results, which are based on data about corporate communication and employee engagement gathered from secondary sources, are described below.

1. A company can enhance employees' organizational trust by establishing an atmosphere of successful internal communication between the stakeholders.
2. Employees with a sense of value are frequently more productive, independent, and willing to contribute to innovation.
3. Employee engagement is influenced positively by communication.
4. Effective business communication enhances employee engagement, which helps an organisation achieve its objective.
5. The primary reasons why employees leave their jobs are typically related to communication.

Conclusion

Organizations are gradually understanding that their people are their most important assets. As a result, they must be particularly focused and attentive to guarantee that employee communication is strengthened, allowing them to achieve their objectives while fully utilising human resources possible. This study confirms and demonstrates that employee communication significantly influences employee engagement levels and serves as a predictor of employee engagement levels in organisations. Corporate communication is positively affecting and boosting employee engagement in organisations; therefore, it is clear that it is playing a significant role. For upsurge employee engagement, businesses and top management must pay close attention to their strategies and methods and make sure they are enhanced in the near future.

Scope for Future Research

For future research, the researcher contends that a variety of corporate communication-related issues need to be investigated. Research may take into account additional elements that affect worker engagement and employee's well-being. Future research may also examine the causes and effects of corporate communication on employee engagement. This study focused exclusively on corporate communication and how it affects employee engagement; nonetheless, it would be intriguing to investigate the problem in a particular sector.

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SIGNIFICANCE OF DISTANCE EDUCATION AND E LEARNING IN HIGHER EDUCATION SYSTEM IN INDIA

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ABSTRACT
The present research focuses on the significance of distance education and e-learning in higher education from the perspectives of students and teachers. It seeks to understand the advantages and challenges of these modalities from both perspectives, as well as identify strategies for successful implementation. The research uses quantitative surveys, and case studies. Findings suggest that distance education and e-learning are perceived positively by most students and teachers, although there remains some resistance among certain categories of individuals. Recommendations include providing adequate training and support, better incentives for faculty members, and increased access to technology.
Keywords: distance education, e-learning, higher education, students, teachers.

Introduction
E-learning, often referred to as online learning, is a form of distance education. It provides students with access to educational content and teaching materials from their homes instead of in a traditional classroom setting. Students learn through these online courses with the help of educational tools such as computers, smart phones, software, and multimedia devices. It is also referred to as distance education, web-based learning, and knowledge transfer in the informal educational domain. Research indicates that use of e-learning is growing and has become a legit way of teaching students more easily. Several studies have been conducted to investigate the role of e-learning in the context of distance education.

The world has seen an unprecedented shift towards distance learning and e-learning modes of education in the past years. The pandemic of 2020 made online teaching a necessity rather than an option for many institutions and educators. This shift has changed the way students learn and the way educators teach. The purpose of this study is to examine the experiences and perceptions of both students and teachers related to distance education and e-learning in higher education, from both a personal as well as professional standpoint.

Scholarly work has shown that e-learning serves many purposes besides just helping learners acquire new knowledge and skills (Chang, 2019). These include enabling learners with disabilities, helping people learn in low resource environments, and allowing instructors to lecture at their convenience while still following the traditional grading standards. The recent technological advancements have also changed the format of online learning, with the evolution of more computer-based learning content, mobile access and connectivity as learners become more connected.

In a study by Li (2017), it was noted that students like the convenience and flexibility offered by e-learning. These are two basic factors that make it important to teach using e-learning over traditional ways. However, another study conducted by Selvam (2016) found that a large number of students do not understand the benefits of e-learning for various reasons which include a lack of demonstrated knowledge about new methods. In the same study, it was found that students and lecturers both are still not confident of the suitability of e-learning for their profession. This can be linked to the lack of understanding of how the approach can be used effectively to gain knowledge.

Barriers, issues and concerns exist in most countries when it comes to using e-learning as an effective approach for education or training for even qualified learners at advanced level who have acquired knowledge and skills through traditional methods. There are various aspects of distance education related to these issues which may have contributed to this matter including:

In some countries, many teachers are not trained properly in regard to how distance education should be conducted. They are more inclined to cut corners and make mistakes which may include the possibility of not providing useful information for students. In some countries, research has shown that the use of e-learning is

being scrutinized by higher education stakeholders because of the inclusion of cost in this mode as opposed to traditional means which have no fees.

In the current situation, e-learning has become a more popular mode of education. Use of technology to reach out to students to establish contact and knowledge sharing is being taken up by institutions. Journalistic research shows that there are several barriers that exist in the use of e-learning as a form of distance education and the incorporation of technology in it. These include:

a. E-learning has gained popularity even among faculty members at universities. However, there is still a lack of knowledge, skills, and confidence among them in how to use it for the benefit of their learners.

However, not all faculty who are trained in e-learning are expert learners themselves. As this practice has become very common in recent years, there are many who have taken charge of the implementation and implementation of e-learning with limited knowledge or experience, which poses difficulties when it comes to implementing e-learning models successfully.

Christopher (2017) notes that some teachers may be cautious about using electronic learning as they feel that it may not conform to traditional rules for teaching and learning.

b. The use of technology in e-learning has come with associated costs which need to be incorporated in the overall budget for a particular institution. This poses a problem for many institutions around the world where they have limited resources that have to be allocated effectively to the various functions of running a university.

c. Some faculty and staff members of institutions do not feel comfortable or confident about using technology as it may be a challenge for them as they feel that they are inadequately trained on how it should be used for effective knowledge sharing and learning at the university level.

d. The use of technology in e-learning; therefore, poses a problem as this involves many forms of new technologies that may not be familiar to some teachers or lecturers. This can cause problems when teaching and learning is transferred online by using online tools.

e. Another issue is that the use of technology can also be a challenge when it comes to paying the costs associated with established technological equipment used in e-learning. For example, Mahmoud (2017) notes that there are some people who are not aware of the full extent of technological equipment usually required at universities which puts them at a disadvantage as they do not know how much to budget for this purpose.

In many countries, the use of e-learning has not been taken up by their institutions because of threshold issues and the need to adopt them to offer quality university education to its learners. There are also barriers that have been raised in relation to adoption of e-learning for teaching and learning which include:

As a result, most universities in low-income communities do not make any provision for e-learning. Therefore, students are not able to benefit from it efficiently as they lack access to these. In low-resource settings, many institutions have adopted online methods for learning because of their lower costs.

f. These allow students to take up distance learning as an approach for supporting their learning and education process. The use of technology in distance education has also resulted in increased opportunities for students to access resources and information which provide them with information on a variety of courses they can take up.

Still, despite the use of e-learning, there are still some issues that are raised when it comes to the use of technology in distance education:

   a. In some countries, although the use of technology in education has been accepted, there are still not sure if their systems meet minimum requirements needed for effective distance learning.

In contrast to this, despite the use of many technological devices at universities for distance learning, it has been noted that these devices are rarely used when it comes to teaching or learning at universities. Many students assume that these technologies will become obsolete before they graduate from their courses and many lack the technical skills needed to make use of all available technologies to achieve educational objectives effectively.

The main reason behind this is lack of training on how e-learning should be conducted.

The current state of e-learning is characterized by many various approaches at different levels around the world which have been adopted by universities.

Many studies on the topic indicate that e-learning does not have many limitations compared to traditional classroom-based learning. E-learning is less time consuming for lecturers and time spent on research is reduced as well. This gives lecturers more time for teaching and less obligations related to research and writing which is difficult for some lecturers.

In recent decades, distance education and e-learning have become increasingly popular as a way of delivering higher education courses. With the development of technologies such as the internet, these modalities have rapidly grown in popularity and now represent one of the main methods for delivering courses in higher education institutions. While these modalities offer numerous benefits to students and universities, there remain questions about their effectiveness and success. This research study seeks to address this issue from the perspective of both students and teachers by examining the advantages, challenges, and strategies for successful implementation of e-learning and distance education in higher education institutions.

Literature Review

Hu (2020) found that distance education and e-learning have been found to offer numerous advantages, such as increased access to educational opportunities, lower cost of delivery, and flexibility in course design. Additionally, students have reported improved academic performance when taking courses through these modalities compared to traditional classroom settings. Despite these potential benefits, challenges remain in terms of implementation, including issues with technology infrastructure, resistance among faculty members, and lack of incentives for them to use distance education or e-learning.

Chawla (2021) found that students' experiences with online courses are positive, but there are some concerns relating to faculty engagement in training. Additionally, he found that many faculty members don't think of themselves as experts in technology and so may not be comfortable with this new pedagogy. He also observed a lack of adequate measures for evaluating online course effectiveness.

Singh (2022) found that while staff members are generally positive about distance education and e-learning, they struggle to adopt these modalities into their teaching practices because they lack adequate training and support. Additionally, many are concerned about providing the same quality of education in these modalities as they can in traditional classroom settings.

Chatterjee (2018) found that the perception of distance education and e-learning is positive among students, with most reporting that this form of learning improves their confidence and increases their knowledge. However, there are concerns about the effectiveness of these modalities from the perspective of teachers. They reported being frustrated with the lack of incentives for faculty members to teach online, as well as resistance from some faculty members about technology usage.

Gupta (2018) found that most faculty members perceive distance education and e-learning very positively compared to other forms of delivery. However, she discovered that a high percentage of teachers are not comfortable teaching online because they do not have adequate training on technology or infrastructure support. Additionally, she found that faculty members are concerned about missing feedback from learners and are reluctant to teach online if they feel comfortable doing so.

In a study on the perception of e-learning among Teachers and Students, Agarwal (2018) found that teachers were not satisfied with their involvement in the e-learning process with only a few participating in designing courses. A majority were dissatisfied with teaching hours, monetary incentives, evaluation methods and assignments for distance education courses which resulted in poor performance of students.

Charakh (2019) found that most teachers have positive perceptions regarding e-learning and distance education. However, there is reluctance from students who prefer to learn in a physical classroom as they prefer to interact with the teacher.

Wang (2019) found that teachers continue to value the advantages of distance education and e-learning, such as students' ability to learn more in a timely manner and to access more courses. However, they become frustrated with how difficult it can be to motivate students to complete coursework without teaching at the same location. It is also found that teachers believe that their students are not learning effectively while taking online courses.

Priya (2018) found that most students were satisfied with the capabilities and flexibility offered by distance education and e-learning. While most were concerned about their reliance on technology, they prefer this modality because it allows them to engage with other students throughout the process.

Rodrigues. (2018) found that the benefits of distance education are greater than those of e-learning amongst faculty members. They reported that faculty members have lower workloads, extra time to prepare and access their own learning materials while they teach, and more autonomy in their work compared to e-learning instructors. However, they have concerns regarding students' ability to access course material and resources.

Nunes (2018) found that while most administrators and faculty members think that distance education and e-learning are effective in terms of cost, quality, socialization, and flexibility; they don't believe that this form of education is effective in terms of reducing workload.

Liu (2017) found that the perceived efficacy of distance education versus traditional classroom delivery is positive among teachers. It is reported a generally positive perception regarding the use of e-learning methods to deliver courses due to their lower cost and flexibility. Additionally, they have concerns about resources available online to engage with students online.

Singh (2018) found that most students report positive experiences with distance education with lower costs and learning more quickly. However, they are concerned about the amount of time it takes to complete course work when using online tools and services.

Zuna (2018) found that students have positive perceptions about their learning experience. It is reported feeling more confident in their abilities to complete coursework if it is taught online. Additionally, it has concerned about how understanding these resources would be without feedback from a human instructor or if guidance would be required from a teacher inside the classroom setting.

Zhao (2017) found that students in online distance education courses report high levels of concern about the quality of course material and the availability of resources for use outside of the classroom context. It has concerned about how understanding these services would be if they were not being taught by a human instructor.

Zhuang (2018) found that students had positive perceptions of their learning experience with distance education, reporting that they learned more quickly than they would have in a traditional classroom setting. However, they also reported having low expectations regarding the quality and relevance of course materials, as well as other available educational resources.

Kumar (2016) found that students were satisfied with the learning process for distance education courses. However, it is believed that technology does not always live up to the standards of their instructors and that online learning should be more accessible by all students due to accessibility issues.

Al-Khudher (2014) found that faculty members are happy with the way they teach while using e-learning as it allows them to bypass time constraints and distractions like grading books and preparing tests, which usually helps improve student engagement and retention.

Overall, there is paucity of research on the efficacy of distance education. This issue is very important for higher education levels as the public funding of distance learning courses at universities has been growing globally over the past decade. As there is a lack of research on these issues, it is difficult to determine which features of distance learning are effective and how these features can be improved. However, there are many studies that aim to determine how effective e-learning and distance education courses are in terms of student outcome measures.

Sauer (2014) found that there was no significant difference between online students and traditional students regarding GPA's, exam scores, and class enrolment after graduation.

Hetland (2015) found that online learning improved student engagement and had a positive impact on their GPA's. Additionally, they found that students were more engaged in the courses when using their laptops than using traditional computers. However, they believe that there is significant opportunity to improve the student learning experience and be more effective in their teaching.

Raghuram. (2017) investigated the effect of presence of a professor on students' performance in a distance education course and concluded that this feature has a positive effect on grades but had no significant effect on participation rate, exam scores, completion percentage of exams and mid-term test-retake rates.

Despite the limited research on student outcome measures, there are studies that have been conducted to examine the effectiveness at higher education institutions of e-learning and distance education courses. Some studies have examined students' performance at universities while being enrolled in e-learning courses, while others have examined the impact of these technologies on teaching and learning. However, those studies did not include a comparison to the control group.

Soina (2012) examined the impact of online learning on student performance at Flemish universities by comparing performance at traditional technology-based classes with that of e-learning courses, in which students received all course materials electronically before attending class and did not meet with their instructor face to face during class. The study found that students who were enrolled in e-learning courses performed better than traditional technology-based classes. They had a higher average of grades (B vs. C), and they also scored higher on their exams and final projects.

The same study investigated student satisfaction in traditional technology-based classes and e-learning courses, finding that students reported being much more satisfied with the online content. This is attributed to its greater flexibility, availability and scalability when compared to the traditional technology-based classes. The researchers concluded that e-learning courses are becoming increasingly popular with learning outcomes comparable to those of face-to-face classes. The purpose of this research study was to examine the significance of distance education and e-learning in higher education, as perceived by both students and teachers. The researchers identified two research questions which could be answered through this study: 1. What are the advantages and challenges involved in effective implementation of distance and online learning? What strategies are available for overcoming these challenges?

Objectives of the study
1. To understand the advantages of distance education and e-learning in higher education from the perspectives of students and teachers
2. To measure the level of satisfaction of the students and teachers about distance education and e-learning.

Hypotheses
H1: Students are reasonably satisfied with distance education and e-learning.

H2: Teachers are reasonably satisfied with distance education and e-learning.

Materials and Methods
The purpose of this study was to examine the significance of distance education and e-learning in higher education, as perceived by both students and teachers. The study is based on a sample of 100 students and 30 faculty members. Students were selected through a random sampling technique while faculty members were selected through purposeful sampling. A pilot study was conducted to test the effectiveness of the research tool. The participants were informed about their right to decline or terminate participation at any time during the study.

Results

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	18-25 years	72	72.0	72.0	72.0
	25-35 years	24	24.0	24.0	96.0
	35-45 years	4	4.0	4.0	100.0
	Total	100	100.0	100.0	

Table 1. Age of the Students

The table shows that 72% of the students were from the age group of 18-25 years. 24% of the students were from the age group of 25-35 years and 4% from 35-45 years. The total of all ages was equal to 100%. Thus, we can conclude that the majority of respondents fell in the 18-25 age bracket. This data might indicate that online

learning and distance education is popular amongst younger people or that younger people are more likely to participate in surveys such as this one.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	50	50.0	50.0	50.0
	Female	50	50.0	50.0	100.0
	Total	100	100.0	100.0	

Table 2. Gender of the students

The table shows that the gender of the respondents was evenly split between male (50%) and female (50%). This suggests that there is an equal representation of both genders in the study.It could be interpreted to mean that online learning and distance education are viewed equally by males and females, or it may indicate that survey participants are more likely to represent a balanced gender ratio. Either way, this data provides valuable insight into the demographic profile of those who participated in this survey.

	Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree	
	Count	Row N %	Count	Row N %	Count	Row N %	Count	Row N %	Count	Row N %
I'm fine with email.	13	13.0%	7	7.0%	10	10.0%	28	28.0%	42	42.0%
I'll actively communicate with my classmates and instructors online.	2	2.0%	1	1.0%	12	12.0%	33	33.0%	52	52.0%
I think my background will help me in school.	1	1.0%	1	1.0%	12	12.0%	27	27.0%	59	59.0%
I think reviewing a course will help me remember it.	8	8.0%	1	1.0%	20	20.0%	36	36.0%	35	35.0%
I'm self-disciplined and can schedule homework and reading time.	11	11.0%	3	3.0%	9	9.0%	19	19.0%	58	58.0%
My study time is well-managed, and I finish assignments on time.	8	8.0%	2	2.0%	8	8.0%	29	29.0%	53	53.0%
I like to talk to my teachers.	9	9.0%	2	2.0%	14	14.0%	33	33.0%	42	42.0%
Online work is possible with my keyboarding skills.	11	11.0%	3	3.0%	12	12.0%	27	27.0%	47	47.0%
I'm comfortable typing in online classes.	16	16.0%	3	3.0%	10	10.0%	24	24.0%	47	47.0%
Internet activities outside of class allow me to quickly ask my teacher questions.	12	12.0%	2	2.0%	11	11.0%	22	22.0%	53	53.0%
I'm inspired by an online activity.	11	11.0%	4	4.0%	14	14.0%	31	31.0%	40	40.0%
Internet activities outside of class allow me to talk to other students.	14	14.0%	3	3.0%	13	13.0%	25	25.0%	45	45.0%
Internet activities outside of class allow me to work with other students.	10	10.0%	2	2.0%	15	15.0%	28	28.0%	45	45.0%
I find online learning more engaging than classroom learning.	6	6.0%	3	3.0%	21	21.0%	30	30.0%	40	40.0%
I think the Internet can easily teach a full course.	14	14.0%	4	4.0%	26	26.0%	32	32.0%	24	24.0%
Without a teacher, I could pass an online course.	13	13.0%	4	4.0%	16	16.0%	37	37.0%	30	30.0%

Table 3. Likert responses of the students

The table shows that most respondents (42%) strongly agree they can easily access the internet as needed for their studies. 28% agreed and 10% were neutral on the matter. Only 7% and 13% disagreed or strongly disagreed respectively.

This suggests that it is relatively easy for students to access the internet in order to complete their studies, which is a positive sign for online learning and distance education. This data provides further evidence of how popular this type of education has become in recent years. It also reinforces the importance of having reliable internet access when studying remotely. It may be beneficial to investigate further into what resources are available to help students maintain secure and reliable connection throughout their studies.

The table shows that a majority of respondents (52%) strongly agree that they are comfortable communicating electronically. 33% agreed and 12% were neutral on the matter. Only 1% and 2% disagreed or strongly disagreed respectively.

This suggests that most participants in this survey are comfortable using electronic communication to participate in online learning and distance education, which is essential for successful engagement with courses offered remotely. It reinforces the importance of having access to reliable internet connection as well as appropriate tools such as messaging applications, video conferencing platforms and other technology related resources when studying remotely. Additionally, it may be important to also consider how effectively students use these tools to communicate with their peers and instructors to successfully engage with remote courses.

This table indicates that most of the respondents (59%) strongly agree that they are willing to actively communicate with their classmates and instructors electronically. 27% agreed, 12% were neutral on this matter, and only 1% disagreed or strongly disagreed respectively.

This suggests that those who participated in this study are eager to engage with online learning and distance education courses by actively communicating with their peers and instructors using electronic communication. This data is further evidence of how popular remote courses have become as well as the fact that students are comfortable using modern technology to learn remotely. It may be important to investigate further into what resources can be provided to help students effectively use electronic communication when studying remotely.

The table shows that most respondents (35%) strongly agree that their background and experience will be beneficial to their studies. 36% agreed, 20% were neutral and only 1% or 8% disagreed or strongly disagreed respectively.

This suggests that most participants in this survey are confident in their ability to succeed in online learning and distance education courses by using the skills they have acquired through previous experiences. This data provides further evidence of how important it is for students to recognize the value of their personal history when engaging with remote learning opportunities. It may be beneficial to investigate what resources can help students use their backgrounds and experiences to achieve success with online courses.

The table shows that most respondents (58%) strongly agree that looking back on what they have learned in a course will help them to remember it better. 19% agreed, 9% were neutral, 3% disagreed and 11% strongly disagreed respectively.

This suggests that most participants in this survey understand the importance of regularly reviewing their work when engaging with online learning and distance education courses. This data is further evidence of how crucial it is for students to review their progress and take time to reflect on what they have learned throughout their course in order to ensure successful outcomes. It may be beneficial to investigate what strategies can be used to help students effectively recall the knowledge they have acquired while studying remotely.

The table shows that most respondents (53%) strongly agree that they are self-disciplined and find it easy to set aside reading and homework time. 29% agreed, 8% were neutral, 2% disagreed and 8% strongly disagreed respectively.

This suggests that most participants in this survey have the internal motivation necessary to succeed with online learning and distance education courses. This data provides further evidence of how important it is for students to have good discipline when engaging with remote learning opportunities. It may be important to investigate what resources can help students maintain a consistent level of focus when studying remotely.

The table shows that most respondents (42%) strongly agree that they are able to manage their study time effectively and easily complete assignments on time. 33% agreed, 14% were neutral, 2% disagreed and 9% strongly disagreed respectively.

This suggests that most participants in this survey have the organizational skills necessary to succeed with online learning and distance education courses. This data is further evidence of how important it is for students to plan and schedule their studies when engaging with remote learning opportunities. It may be beneficial to investigate what methods can help students stay organized when studying remotely.

The table shows that most respondents (47%) strongly agree that they like a lot of interaction with their instructors and/or teaching assistants. 27% agreed, 12% were neutral, 3% disagreed and 11% strongly disagreed respectively.

This suggests that most participants in this survey are looking for more personal engagement when engaging with online learning and distance education courses. This data is further evidence of how essential it is for students to seek out support and guidance when studying remotely. It may be important to investigate what services can help students stay in contact with their peers and instructors while taking online courses.

The table shows that the majority of respondents (47%) strongly agree that they possess sufficient computer keyboarding skills for doing online work. 24% agreed, 10% were neutral, 3% disagreed and 16% strongly disagreed respectively.

This suggests that most participants in this survey have basic computer literacy skills necessary to succeed with online learning and distance education courses. This data provides further evidence of how important it is for students to equip themselves with the technical knowledge needed when engaging with remote learning opportunities. It may be beneficial to investigate what resources can help students develop their computer literacy when studying remotely.

The table shows that the majority of respondents (53%) strongly agree that they feel comfortable composing text on a computer in an online learning environment. 22% agreed, 11% were neutral, 2% disagreed and 12% strongly disagreed respectively.

This suggests that most participants in this survey have the digital literacy skills necessary to succeed with online learning and distance education courses. This data is further evidence of how beneficial it is for students to be familiar with technology when engaging with remote learning opportunities. It may be important to investigate what tools can help students become more adept at using computers when studying remotely.

The table shows that the majority of respondents (40%) strongly agree that they can ask their teacher questions and receive a quick response during Internet activities outside of class. 31% agreed, 14% were neutral, 4% disagreed and 11% strongly disagreed respectively.

This suggests that most participants in this survey are looking for more direct engagement when engaging with online learning and distance education courses. This data is further evidence of how important it is for students to have direct access to instructors when studying remotely. It may be beneficial to investigate what methods can help students get quick answers to their questions while taking online courses.

The table shows that the majority of respondents (45%) strongly agree that they are motivated by the material in an Internet activity outside of class. 25% agreed, 13% were neutral, 3% disagreed and 14% strongly disagreed respectively.

This suggests that most participants in this survey have found online learning and distance education courses engaging. This data is further evidence of how essential it is for students to make use of the resources available when studying remotely. It may be important to investigate what methods can help students stay interested and motivated while taking online courses.

The table shows that the majority of respondents (45%) strongly agree that they can discuss with other students during Internet activities outside of class. 28% agreed, 15% were neutral, 2% disagreed and 10% strongly disagreed respectively.

This suggests that most participants in this survey are seeking out more collaboration when engaging with online learning and distance education courses. This data provides further evidence of how beneficial it is for students to have access to peers when studying remotely. It may be advantageous to investigate what tools can help students foster meaningful discussions while taking online courses.

The table shows that the majority of respondents (40%) strongly agree that they can collaborate with other students during Internet activities outside of class. 30% agreed, 21% were neutral, 3% disagreed and 6% strongly disagreed respectively.

This suggests that most participants in this survey have the capability to work together when engaging with online learning and distance education courses. This data is further evidence of how beneficial it is for students to be able to collaborate when studying remotely. It may be important to investigate what methods can help students form productive partnerships while taking online courses.

The table shows that the majority of respondents (32%) agree that learning on the Internet outside of class is more motivating than a regular course. 24% strongly agreed, 26% were neutral, 4% disagreed and 14% strongly disagreed respectively.

This suggests that most participants in this survey find online learning and distance education courses more engaging than traditional classrooms. This data provides further evidence of how important it is for students to be able to access materials whenever they need when studying remotely. It may be beneficial to investigate what resources can help students stay motivated while taking online courses.

The table shows that the majority of respondents (37%) agree that a complete course can be given by the Internet without difficulty. 30% strongly agreed, 16% were neutral, 4% disagreed and 13% strongly disagreed respectively.

This suggests that most participants in this survey believe that online learning and distance education courses are feasible to implement and execute effectively. This data is further evidence of how beneficial it is for students to have access to comprehensive materials when studying remotely. It may be advantageous to investigate what tools can help students complete their classes successfully while taking online courses.

The table shows that the majority of respondents (48%) agree that they can pass a course on the Internet without any teacher assistance. 26% strongly agreed, 16% were neutral, 3% disagreed and 7% strongly disagreed respectively.

This suggests that most participants in this survey are confident in their ability to learn from online learning and distance education courses independently. This data provides further evidence of how empowering it is for students to have access to resources when studying remotely. It may be important to investigate what technologies can help students gain autonomy while taking online courses.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	18-25 years	1	3.3	3.3	3.3
	25-35 years	11	36.7	36.7	40.0
	35-45 years	18	60.0	60.0	100.0
	Total	30	100.0	100.0	

Table 5. Age of the teacher

The table shows that 60% of the teachers belonged to the age group of 35-45 years. This indicates that most of the teachers in the sample were experienced and had a higher level of qualification. The next largest group was 25-35 years with 36.7% which suggests that these teachers are relatively new to the profession but would have at least some experiences due to their age. Lastly, 3.3% belonged to 18-25 years which could be indicative of young and inexperienced teachers who are perhaps still studying for their qualification or newly qualified. Overall, this data shows a clear trend towards more experienced teachers being present in the sample population.

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	10	33.3	33.3	33.3
	Female	20	66.7	66.7	100.0
	Total	30	100.0	100.0	

Table 6. Gender of the teachers

The table above shows that most teachers in the sample population were female at 66.7%. This data could suggest that more women are drawn to teaching as a profession, or alternatively there may be fewer job opportunities available for male teachers. The 33.3% of male teachers gives an indication that some men have chosen the profession despite it being dominated by females. From this data it can be concluded that female teachers tend to outnumber their male counterparts in the sample population.

	Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree	
	Count	Row N %	Count	Row N %	Count	Row N %	Count	Row N %	Count	Row N %
Online teaching suits me.	1	3.3%	3	10.0%	2	6.7%	14	46.7%	10	33.3%
Online tests can accurately assess student performance.	1	3.3%	4	13.3%	2	6.7%	12	40.0%	11	36.7%
Online instruction is faster than in-person communication.	1	3.3%	4	13.3%	5	16.7%	13	43.3%	7	23.3%
I can answer teaching questions.	0	0.0%	0	0.0%	0	0.0%	14	46.7%	16	53.3%
I feel comfortable communicating with students via social media.	2	6.7%	2	6.7%	2	6.7%	12	40.0%	12	40.0%
I can find teaching resources on Google Chrome, Firefox, or Safari.	2	6.7%	4	13.3%	2	6.7%	12	40.0%	10	33.3%
I've used Zoom, Microsoft Teams, Canvas, or another synchronous online teaching platform.	1	3.3%	3	10.0%	2	6.7%	11	36.7%	13	43.3%
I plan online courses.	2	6.7%	3	10.0%	2	6.7%	15	50.0%	8	26.7%
I make and follow schedules.	1	3.3%	3	10.0%	1	3.3%	9	30.0%	16	53.3%

Table 7. Likert Responses of the teachers

The data in the table shows that, overall, the majority of teachers felt positively towards online teaching. With 46.7% indicating they agree and 33.3% indicating they strongly agree, it can be concluded that most teachers view online teaching as a suitable option for them. This is further reinforced by the low number of those who disagree or strongly disagree at 10% and 3.3%, respectively. Thus, it appears that most teachers believe that online teaching offers them an effective way to reach their students and teach effectively remotely.

The data in the table above shows that most teachers felt positively towards online tests as a method of assessing student performance. With 40% indicating they agree and 36.7% strongly agreeing, it can be concluded that most teachers view online tests as an effective way of assessing their students. This is further reinforced by the low number of those who disagree or strongly disagree at 13.3% and 3.3%, respectively. Thus, it appears that most teachers believe that online tests offer an accurate assessment of student performance and should be used as part of their pedagogical strategies. "

The data in the table indicates that most teachers agreed that online instruction is faster than in-person communication. With 43.3% indicating they agree and 23.3% indicating they strongly agree, it can be determined that most teachers found online instruction to be a fast way to communicate with their students. This is further supported by the low number of those who disagree or strongly disagree at 13.3% and 3.3%, respectively. Therefore, it appears that most teachers believe that online instruction offers them an efficient way to teach and communicate with their students more quickly than through traditional face-to-face methods.

The data in the table indicates that most teachers felt confident in their ability to answer teaching questions. With 53.3% indicating they strongly agree and 46.7% indicating agreement, it can be concluded that most teachers felt capable of responding to student inquiries and providing guidance on educational topics. This is further reinforced by the fact that there were no answers given under disagree or strongly disagree; thus, there was an overall positive sentiment from this sample population towards their own abilities as teachers. It appears that most teachers had a high level of confidence in their knowledge and expertise when it came to teaching-related matters.

The data in the table indicates that most teachers felt comfortable communicating with students via social media. With 40% indicating both agree and strongly agree, most teachers were open to using this method of communication with their students. This is further supported by the low number of those who disagreed or strongly disagreed at 6.7%, thus providing an overall positive sentiment towards this form of communication. Thus, it appears that most teachers found social media to be a suitable way to communicate and interact with their students.

The data in the table above indicates that a majority of teachers felt comfortable using popular web browsers such as Google Chrome, Firefox, and Safari to find teaching resources. With 33.3% indicating they strongly agree and 40% indicating agreement, it can be determined that most teachers found these platforms convenient for locating educational materials. This is further supported by the low number of those who disagreed or strongly disagreed at 13.3% and 6.7%, respectively. Therefore, it appears that most teachers were aware of the potential for finding useful teaching resources on the internet through modern browsers like Google Chrome, Firefox, and Safari.

The data in the table indicates that most teachers have used some form of synchronous online teaching platform such as Zoom, Microsoft Teams, or Canvas. With 43.3% indicating they strongly agree and 36.7% indicating agreement, it can be determined that most teachers had utilized these platforms at least once before. This is further supported by the low number of those who disagreed or strongly disagreed at 10% and 3.3%, respectively. Therefore, it appears that most teachers were familiar with using this type of technology to facilitate their lessons and communicate with their students remotely.

The data in the table indicates that most teachers had planned online courses before. With 50% indicating agree and 26.7% indicating strongly agree, most teachers had experience creating virtual learning plans for their students. This is further supported by the low number of those who disagreed or strongly disagreed at 10% and 6.7%, respectively. Thus, it appears that most teachers were competent in designing course material for an online environment.

The data in the table indicates that a majority of teachers used schedules to organize their lessons. With 53.3% indicating they strongly agree and 30% indicating agreement, it can be determined that most teachers were comfortable with making and following plans for their classes. This is further supported by the low number of those who disagreed or strongly disagreed at 10% and 3.3%, respectively. Therefore, it appears that most teachers relied on some kind of schedule to keep track of their responsibilities as an educator.

Overall, these results show that most teachers are comfortable using a variety of technologies to facilitate their lessons and interact with students online. This includes social media platforms, web browsers, synchronous teaching platforms, planning tools, and schedules. Teachers are able to utilize these resources effectively and efficiently in order to provide the best education possible to their students.

The data gathered from this survey indicates a high level of technology literacy among educators. They have experience using popular web browsers, synchronous online teaching platforms, planning tools, and schedules. As such, they are well-equipped to transition into an online learning environment if needed. Given the current situation due to the COVID-19 pandemic, having a digitally literate workforce of teachers is invaluable for providing quality education during periods of remote learning. Therefore, it is essential for educators to continue developing their technological skills to remain prepared and effective in any educational setting.

Testing of Hypothesis

	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Online teaching suits me.	4.966	29	.000	.96667	.5685	1.3648
Online tests can accurately assess student performance.	4.474	29	.000	.93333	.5066	1.3600
Online instruction is faster than in-person communication.	3.525	29	.001	.70000	.2939	1.1061
I can answer teaching questions.	16.551	29	.000	1.53333	1.3439	1.7228
I feel comfortable communicating with students via social media.	4.664	29	.000	1.00000	.5615	1.4385
I can find teaching resources on Google Chrome, Firefox, or Safari.	3.525	29	.001	.80000	.3359	1.2641
I've used Zoom, Microsoft Teams, Canvas, or another synchronous online teaching platform.	5.253	29	.000	1.06667	.6514	1.4819
I plan online courses.	3.788	29	.001	.80000	.3681	1.2319
I make and follow schedules.	5.835	29	.000	1.20000	.7794	1.6206

(Test Value = 3)

Table 8. One-Sample Test for teachers

The above table shows that in all the cases the mean difference is positive, and the P values are lesser than 0.05. This means that the hypothetical means are lower than the actual mean in all the cases. This helps us to understand that the responses of the teachers to the statements are positive. With this we can reject the null hypothesis and accept that **"teachers are reasonably satisfied with distance education and e-learning."**

	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
I'm fine with email for communicating with teachers	15.089	99	.000	1.32000	1.1464	1.4936
I'll actively communicate with my classmates and instructors online.	17.344	99	.000	1.42000	1.2575	1.5825
I think my background will help me in school.	7.773	99	.000	.89000	.6628	1.1172
I think reviewing a course will help me remember it.	8.227	99	.000	1.10000	.8347	1.3653
I'm self-disciplined and can schedule homework and reading time.	9.906	99	.000	1.17000	.9356	1.4044
My study time is well-managed, and I finish assignments on time.	8.018	99	.000	.97000	.7299	1.2101
I like to talk to my teachers.	7.329	99	.000	.96000	.7001	1.2199
Online work is possible with my keyboarding skills.	5.697	99	.000	.83000	.5409	1.1191
I'm comfortable typing in online classes.	7.565	99	.000	1.02000	.7525	1.2875
Internet activities outside of class allow me to quickly ask my teacher questions.	6.549	99	.000	.85000	.5925	1.1075
I'm inspired by an online activity.	6.009	99	.000	.84000	.5626	1.1174
Internet activities outside of class allow me to talk to other students.	7.603	99	.000	.96000	.7095	1.2105
Internet activities outside of class allow me to work with other students.	8.396	99	.000	.95000	.7255	1.1745
I find online learning more engaging than classroom learning.	3.719	99	.000	.48000	.2239	.7361

(Test Value = 3)

I think the Internet can easily teach a full course.	5.142	99	.000	.67000	.4114	.9286
Without a teacher, I could pass an online course.	7.731	99	.000	.83000	.6170	1.0430

Table 9. One-Sample T Test for students

The above table shows that in all the cases the mean difference is positive and the P values are lesser than 0.05. This means that the hypothetical means are lower than the actual mean in all the cases. This helps us to understand that the responses of the teachers to the statements are positive. With this we can reject the null hypothesis and accept that "students are reasonably satisfied with distance education and e-learning."

Conclusion

The results of the one-sample t tests suggest that teachers and students are both reasonably satisfied with distance learning and e-learning, as they have provided positive responses to statements pertaining to their use of these technologies. The significant p values indicate that the difference between their hypothetical means, and actual mean is not due to chance. This provides evidence for the acceptance of our hypothesis. As a result, it can be concluded that distance learning and e-learning are two viable approaches to teaching in today's world. With more research, it is possible to refine them even further. However, this study reveals that they are already successfully engaged in by both teachers and students alike.

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SIGNIFICANCE OF FINANCIAL PLANNING AND FORECASTING FOR INDIAN MULTINATIONAL COMPANIES

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ABSTRACT
The organization is not just a single entity, but a collection of people who need to work together to achieve the desired objectives. For this purpose, it is necessary for the company to develop and present a plan that lays out direction and sets goals. The objective of an estimate is to provide information on what resources may be needed in order for the company to execute its strategy successfully. Financial planning can help organizations in managing cash flow, investment opportunities and liabilities. Financial planning and forecasting is the process of setting goals, forecasts, resource requirements and other indicators – to reach them using a reasonable budget. The estimates reveal how much funding the organization needs from its customers or investors so that it can achieve its strategic objectives. Corporate finance is one part of management accounting, which refers to all aspects of financial reporting containing information about assets, liabilities and financial results. The current study deals with the significance of planning and forecasting for Indian Multinational Corporations. The study was carried out based on a survey of 100 finance department employees of 10 leading MNCs who have offices in Pune & Mumbai. The results of the study indicate that Indian MNCs are looking forward to improving their financial planning and projections, which will enable them to make better decisions that can help them achieve their goals.
Keywords: Financial Planning, Forecasting, Financial Management, Indian Multinational Companies

Introduction
The success of any organization is directly linked to the capability of its finance department. The company's operation depends on the amount of money it has available at the right time, therefore, everyone in the organization must have a clear understanding of how it operates. This means assuming responsibility for all financial aspects of its business. Finance is one part of management accounting, which refers to all aspects of financial reporting containing information about assets, liabilities, and financial results.

The study deals with the significance of planning and forecasting for Indian Multinational Corporations. The organization is not just a single entity, but a collection of people who need to work together to achieve the desired objectives. For this purpose, it is necessary for the company to develop and present a plan that lays out direction and sets goals. The objectives of an estimate are to provide information about what resources may be needed in order for the company to successfully execute its strategy.

Management accounting is a subset of the field of accounting which is concerned with determining how much money should be spent on inputs to create a product or service and how much should be paid out as an output for a product or service as well as what its value might be. Management accounting uses rigorous, statistical analysis to provide timely, relevant information to managers, who can then make better business decisions. A primary function of management accounting is financial planning and analysis, which involves forecasting future needs for resources and estimating costs. These estimates are formed in the budgeting process.

Financial planning deals with the resources that an organization needs for day-to-day operations and long-term growth. A comprehensive financial plan will include an analysis of the status of the organization, its goals, plans for investment and important components in the budget including revenues and expenses.

Financial planning is part of corporate finance that deals with all aspects of financial reporting containing information about assets, liabilities, and financial results. The current study deals with the significance of planning and forecasting for Indian Multinational Corporations. The study was carried out based on a survey of 100 finance department employees of 10 leading MNCs who have offices in Pune & Mumbai.

Review of Literature

Khurana (2019) has discussed the process of planning and forecasting for Indian Multinational Corporations. The organization is not just a single entity, but a collection of people who need to work together to achieve the desired objectives. For this purpose, it is necessary for the company to develop and present a plan that lays out direction and sets goals. The objective of an estimate is to provide information about what resources may be needed for the company to successfully execute its strategy.

Planning is setting a direction for the future, making decisions about the business, and implementing these programs. Planning is a management process that helps an organization to think about what will happen in the future and to develop ways of dealing with this. A plan is a document that provides details about what needs to be done, when a particular task will be performed and who will do it.

Planning and forecasting are important for all organizations because they provide guidance for decision-making for groups or departments within any organization. The main purpose of planning and forecasting is to predict the future for companies to be able to formulate their current plans and budget into the future.

The importance of forecasting in business is increasing, as businesses attempt to control scarce resources that are limited by capabilities. Forecasting helps them anticipate resource needs and helps them avoid oversupplying a particular commodity unnecessarily. For example, most businesses have noticed that they do not know how much inventory will be required on hand at some future date. For a business to make accurate estimates, it must have a clear understanding of demand patterns and supply patterns. The organization must also understand what resources are available on hand that can be utilized in such a way as to make the process efficient.

Gokhale (2021) has discussed the significance of planning and forecasting for Indian Multinational Corporations. The research paper discusses what planning and forecasting is all about. Planning and forecasting are two crucial processes which play a vital role in any organization wherein the organization's objectives are formed by the businesses, then they define its strategies, set goals and objectives as well as analyse their status. To achieve these objectives, they take one or more courses that can be either quantitative or qualitative.

Shah (2016) in his study states that the purpose of planning and forecasting is to ensure that all the resources are allocated at their most effective positions for organizational success. Thus, managing the supply chain effectively considers all budgeted activities and planned activities by doing detailed planning for the supply chain. A comprehensive financial plan will include an analysis of the status of the organization, its goals, plans for investment and important components in the budget including revenues and expenses.

Staw (2019) has said that planning is an act of calculating future needs by creating a set of goals while forecasting is a process to predict future demand based on historical data. The results of the study indicate that the role of forecasting is quite important in planning, and it is also responsible for accurate planning. The main purpose of forecasting is to inform the management by providing best estimates of future demand. Furthermore, it can also be used to create plans that enable the management to reduce costs or implement program policies. A thorough understanding of the process should provide useful insights into how different components can make a difference in terms of accuracy of prediction and how good planning will lead to a better business.

Planning and forecasting are two important components of business management, often used together for strategic positioning and decision-making. Planning is crucial for all organizations because they provide guidance for decision-making for groups or departments within any organization. The main purpose of planning and forecasting is to forecast the future for companies to be able to formulate their current plans and budget into the future.

In addition, it is necessary for an organization to have a set of goals which they need to fulfil in order to stay in the leadership position. A plan helps them determine what they will do and how they will accomplish it. This is accomplished by setting objectives, analysing data and interpreting results in order to determine the business strategies that can lead an organization to achieve these goals. Planning ensures that important goals are met during each time frame (quarterly, yearly, etc.).

Siraj (2019) performed a study entitled "Impact of forecasting on sales and demand management at General Tyre and Rubber (GTR) Pakistan Ltd." The research paper discusses the effective practices of forecasting at companies where accurate estimates are a necessity. The study also details how different techniques of forecasting can be implemented to create better decisions, which will lead to better results.

Khan (2019) performed a study entitled "Forecasting Tools for Greyhound Corporation". The study explains about the corporate requirement for forecasting and the application that is needed in order for an organization to plan effectively. By using these tools and methods, an organization can anticipate future target sales and price points accordingly.

There are many different methods used to forecast demand. Forecasting is used to forecast demand in a way that will allow the company to be aware of their competitors, to plan promotional activities and to determine the pricing strategy. The use of these tools have changed the way companies think about marketing and can help an organization improve their product or service availability with better planning.

The main purpose of forecasting is to predict future sales and then plan for future campaigns that will be required in order for an organization to reach their goals. Forecasting also allows an organization to identify areas where there could be increased demand as well as where demand has been reduced or may decrease in the upcoming years.

Another paper by Jain. (2019) entitled "Forecasting Demand for Wholesale Markets of the United States" defines the methods used to forecast demand. The purpose of this paper is to explain about the number-one method used by fast-food companies, to understand their impact on the industry and consumer buying habits.
The main purpose of forecasting is to plan future sales and activities that will take place for an organization to succeed. The success of any business depends on planning, where they can forecast accurately so they can reduce expenses as well as increase sales.

As far as financial management is concerned, another study by Mohammad (2019) entitled "The Effect of Demand Forecasting Tools on Financial Performance" explains the different factors that influence the financial performance of an organization. The study also defines what tools are used to create predictions and how they can be implemented in order to improve a business's forecast and planning processes.

The purpose of forecasting is to plan future sales figures, which will lead to a better financial result for an organization by knowing the current state of the demand curve. The study cited above indicates that there are three primary methods used to forecast demand including: demand analysis, exponential smoothing and moving average analysis. The three techniques are all effective to forecast future demand, which will provide the organization with a better understanding on what and how much they would expect to sell.

The main purpose of forecasting is to anticipate demand and adjust in order for an organization to succeed. The study mentioned above shows that there are three methods used to forecast for a business to be successful, and each method provides a different approach that results in different forecasts. Along with this, the method of forecasting is adjusted depending on the size of the organization, the type of products sold as well as how they want their results calculated.

Kale & Gawande (2016) performed a study entitled "Forecasting Techniques: A Comparative Study on the Effectiveness of Different Methods". The research paper compares the different techniques used to forecast demand and examines the strengths and weaknesses of each technique. The purpose of this study is to explain about the method that provides the best outcome for any business, compared to other techniques.

The main purpose of forecasting is to anticipate future sales results so that an organization can adjust in order for them to succeed. In this report, there have been three methods used to forecast demand, including: exponential smoothing, moving average analysis and demand analysis (EOQ). Each method provides a successful outcome for an organization, however with different results as well as different complications in its use. There are several studies in financial planning and forecasting that underline the importance of certain methods that are used. Yet, a study that underlines the importance of financial planning and forecasting for multinational companies is not performed. Thus, the current study fills an important gap in research and contributes to original knowledge which makes the study significant. The findings of the current study are expected to help multinational companies to benefit from financial planning and forecasting. The findings of this study are also expected to contribute to the theoretical knowledge related to financial planning and forecasting.

Objectives of the study
1. To find out the significance of planning and forecasting in corporate finance.
2. To assess the factors influencing financial planning and forecasting of Indian MNCs.

Hypotheses

H1: Planning and forecasting activities are the most significant aspects in corporate finance among Indian MNCs.

H2: Several factors influence financial planning and forecasting of Indian MNCs.

Methodology

The current study is a descriptive study which aims to explore the significance of planning and forecasting activities in corporate finance among Indian MNCs. This study will utilize quantitative research methods in order to gain an in-depth understanding of the subject matter. Data will be gathered from primary sources such as a survey. An online survey will also be conducted to collect data from Indian MNCs. Data analysis techniques including descriptive statistics and regression analysis will be utilized to analyse the collected data. Several factors influence financial planning and forecasting of Indian MNCs.

They are as follows:

I.   Internal Factors:

1. Corporate Strategy: The corporate strategy of a company strongly influences its financial planning and forecasting. It involves decisions related to investments, products or services, risk management, and human resource management.

2. Strategic Objectives: Companies have various strategic objectives that need to be taken into account when making financial projections for the future. These can include market share goals, financial targets, and customer satisfaction levels.

3. Operating Leverage: The leverage of operations plays a huge role in the financial planning process. Companies need to understand their fixed costs versus variable costs and how these impact their overall profitability.

4. Financing Needs: Financial decisions regarding financing needs are also important for companies to consider when making financial projections. This includes decisions related to debt, equity, and short-term liquidity needs.

II.   External Factors:

1. Global Economic Trends: The global economy is constantly changing, and this affects the performance of companies across different sectors in India. Companies need to understand the impact of external economic trends on their business and make financial projections accordingly.

2. Regulatory Environment: The regulatory environment also impacts the financial planning process for Indian MNCs. Companies need to be aware of any changes in regulations that could affect their operations or profitability.

3. Industry Trends: To remain competitive, companies need to stay abreast of industry trends and incorporate these into their financial planning. This includes understanding potential competitors, customer preferences, and technological advancements.

4. Macroeconomic Indicators: Indian MNCs need to be aware of macroeconomic indicators like GDP growth rate, inflation rate, unemployment rate etc., which could have an impact on the performance of their business in the long-term.

By taking into account these various factors, Indian MNCs can make effective financial plans and forecasts that will help them to maximize profits and minimize risks. Financial planning and forecasting is essential for the success of any business. It helps companies to analyze their current position and plan for future growth. With the right strategies in place, Indian MNCs can ensure a successful future.

One of the key factors that affect financial planning in big companies is their size. The larger the company, the more money and resources it requires to manage its finances. Additionally, larger businesses tend to have higher fixed costs, such as rent, employee salaries, and other overhead expenses, which can have a significant impact on financial planning.

Other factors that can influence financial planning in big companies include the global economy, industry trends, government regulations and laws, taxation policies, competitive forces, customer demand, company culture and structure, and various other external factors. In addition to these external influences, it is important for businesses to also consider their own internal factors such as budgeting processes, financial reporting systems, risk management strategies, and financial forecasting techniques. All of these considerations must be taken into account in order to ensure that the company is making sound decisions with regards to their financial planning.

Finally, it is important for big companies to be aware of their own strengths and weaknesses as they relate to their financial planning. This includes understanding their strengths in terms of personnel, resources, and capabilities. It also includes recognizing any areas where they may need to improve or adjust their strategies in order to stay competitive. By taking into account all of these factors, big companies can ensure that they are making the best decisions possible when it comes to managing their finances.

Results and Discussions

	No impact at all		Less Impact		Average Impact		Fair Impact		Maximum Impact	
	Count	Row N %	Count	Row N %	Count	Row N %	Count	Row N %	Count	Row N %
Global Economic Trends	4	4.0%	4	4.0%	10	10.0%	35	35.0%	47	47.0%
Regulatory Environment:	6	6.0%	6	6.0%	12	12.0%	34	34.0%	42	42.0%
Competitive forces	4	4.0%	4	4.0%	11	11.0%	42	42.0%	39	39.0%
Customer Demand for products and services	6	6.0%	8	8.0%	10	10.0%	27	27.0%	49	49.0%
Industry Trends	10	10.0%	9	9.0%	10	10.0%	31	31.0%	40	40.0%
Macroeconomic Indicators	6	6.0%	4	4.0%	6	6.0%	29	29.0%	55	55.0%
Corporate Strategy	6	6.0%	5	5.0%	10	10.0%	34	34.0%	45	45.0%
Strategic Objectives	6	6.0%	5	5.0%	10	10.0%	30	30.0%	49	49.0%
Operating Leverage	2	2.0%	4	4.0%	15	15.0%	31	31.0%	48	48.0%
Financing Needs	6	6.0%	7	7.0%	10	10.0%	31	31.0%	46	46.0%
Budgeting processes	4	4.0%	8	8.0%	10	10.0%	31	31.0%	47	47.0%
Financial reporting systems	2	2.0%	7	7.0%	10	10.0%	34	34.0%	47	47.0%
Risk management strategies	0	0.0%	2	2.0%	3	3.0%	36	36.0%	59	59.0%
Financial forecasting techniques	2	2.0%	4	4.0%	7	7.0%	35	35.0%	52	52.0%

Table no 1. Impact of Internal and External Factors on financial planning and forecasting.

According to the table, 47% of the respondents stated that there is a maximum impact of global economic trends on financial planning and forecasting. 35% of the respondents believed that there is a fair impact, 10% reported an average impact, 4% felt that there is less impact and another 4% said that there is no impact at all.

The global economy is currently facing numerous challenges due to the cascading effect of the coronavirus pandemic. As businesses have had to close or reduce their operations, the economic impact has been felt across the globe. This can have a significant effect on financial planning and forecasting, as businesses may need to adjust their plans to accommodate for new market conditions and customer behaviour.

As such, it is important for businesses to be aware of global economic trends in order to make informed decisions when it comes to financial planning and forecasting. This includes being aware of economic indicators such as GDP, unemployment rates, and inflation. Additionally, businesses should be aware of international trade agreements, geopolitical events, and technological advances that may affect the global economy in the future. By doing so, businesses can ensure that their financial planning and forecasting remain accurate and effective even during times of economic uncertainty.

42% of respondents felt that there is a maximum impact of the regulatory environment on financial planning and forecasting. 34% reported a fair impact, 12% said that there is an average impact, 6% reported less impact and another 6% felt that there is no impact at all.

The regulatory environment can have a significant effect on financial planning and forecasting as governments can put in place policies or laws that may affect the way businesses operate. This can range from changes to taxation rules to new regulations for the financial services industry. Businesses need to be aware of any changes that may affect their operations, as this could have an impact on their financial plans.

4% of the respondents reported that there is no impact at all of competitive forces on the financial planning and forecasting. Another 4% felt that there is less impact, 11% said that there is an average impact, 42% reported a fair impact and 39% stated that there is a maximum impact.

In today's business environment, it is important for businesses to understand the competitive forces that are at play in order to make informed decisions. This includes being aware of the competition, as well as any new technologies or trends that could disrupt their markets. By understanding these forces, businesses can ensure that their financial planning and forecasting is adapted with the changing environment.

6% of the respondents reported that there is no impact at all of customer demand on the financial planning and forecasting. 8% said that there is less impact, 10% felt that there is an average impact, 27% reported a fair impact and 49% stated that there is a maximum impact.

Given the current economic environment, it is essential for businesses to understand their customers' demands in order to make sound financial plans. This includes understanding customer preferences and purchasing behaviour, as well as any shifts that may be taking place due to the pandemic. By doing so, businesses can ensure that their financial planning and forecasting remains accurate and up-to-date.

10% of the respondents reported that there is no impact at all of industry trends on financial planning and forecasting. 9% felt that there is less impact, 10% said that there is an average impact, 31% reported a fair impact and 40% stated that there is a maximum impact.

The state of an industry can have a significant effect on financial plans and forecasts. It is important for businesses to be aware of any trends that may be taking place in their industry, as this can help them adjust their plans accordingly. By understanding these trends, businesses can ensure that their financial planning and forecasting remain effective even during times of industry-wide disruption.

6% of the respondents reported that there is no impact at all on macroeconomic indicators on the financial planning and forecasting. 4% said that there is less impact, 6% felt that there is an average impact, 29% reported a fair impact and 55% stated that there is a maximum impact.

The global economy can have a major impact on the financial plans and forecasts of businesses. It is important to monitor macroeconomic indicators such as inflation, unemployment and GDP growth in order to anticipate changes that may be necessary in order to adjust plans accordingly. By keeping an eye on these indicators, businesses can ensure that their financial planning and forecasting remain accurate even in uncertain times.

6% of the respondents reported that there is no impact at all of corporate strategy on the financial planning and forecasting. 5% said that there is less impact, 10% felt that there is an average impact, 34% reported a fair impact and 45% stated that there is a maximum impact.

The overall strategy of a business can have a major impact on its financial plans and forecasts. It is important for businesses to have an understanding of their long-term goals and objectives in order to ensure that their financial planning and forecasting remain aligned with those goals. By doing so, businesses can ensure that their plans are realistic and relevant even during times of uncertainty.

6% of the respondents reported that there is no impact at all of strategic objectives on the financial planning and forecasting. 5% said that there is less impact, 10% felt that there is an average impact, 30% reported a fair impact and 49% stated that there is a maximum impact.

Businesses need to have clear goals and objectives in order to ensure that their financial planning and forecasting reflect those goals. It is important to understand the strategic objectives of a business in order to make sure that the plans are tailored to meet those goals.

2% of the respondents reported that there is no impact at all of operating leverage on the financial planning and forecasting. 4% said that there is less impact, 15% felt that there is an average impact, 31% reported a fair impact and 48% stated that there is a maximum impact.

The degree of operating leverage can have a significant impact on the financial planning and forecasting of a business. This measure can help businesses to understand their risk profile and make important decisions regarding investments, pricing strategies, cost savings and other aspects of the operations.

6% of the respondents reported that there is no impact at all of financing needs on the financial planning and forecasting. 7% said that there is less impact, 10% felt that there is an average impact, 31% reported a fair impact and 46% stated that there is a maximum impact.

Financing needs can have an important impact on financial planning and forecasting. Understanding the current and future financing needs of a business is essential in order to ensure that those needs are taken into account when making predictions about the future.

4% of the respondents reported that there is no impact at all of budgeting processes on the financial planning and forecasting. 8% said that there is less impact, 10% felt that there is an average impact, 31% reported a fair impact and 47% stated that there is a maximum impact.

Budgeting processes can be an important factor in financial planning and forecasting. It is vital for businesses to have a clear understanding of the budgeting processes that are in place in order to ensure that the plans and forecasts remain realistic and accurate.

2% of the respondents reported that there is no impact at all of financial reporting systems on the financial planning and forecasting. 7% said that there is less impact, 10% felt that there is an average impact, 34% reported a fair impact and 47% stated that there is a maximum impact.

Financial reporting systems are essential for businesses to be able to obtain accurate financial information that can help inform their plans and forecasts. Having an effective financial reporting system in place is key to making sure that the decisions made are based on reliable data.

2% of the respondents reported that there is less impact of risk management strategies on financial planning and forecasting. 3% said that there is average impact, 36% felt that there is a fair impact and 59% stated that there is a maximum impact.

Having an effective risk management strategy in place is essential for businesses to be able to make informed decisions regarding their financial plans and forecasts. Risk management strategies help businesses to identify potential risks, assess the severity of those risks, and develop strategies to mitigate or eliminate them.

2% of the respondents reported that there is no impact at all of financial forecasting techniques on the financial planning and forecasting. 4% said that there is less impact, 7% felt that there is an average impact, 35% reported a fair impact and 52% stated that there is a maximum impact.

Financial forecasting techniques are integral to financial planning and forecasting. Having a clear understanding of the techniques being used is essential in order to ensure that all aspects of the financial plans and forecasts are taken into account when making decisions.

	N	Mean	Std. Deviation	Std. Error Mean
Global Economic Trends	100	4.1700	1.03529	.10353
Regulatory Environment:	100	4.0000	1.15470	.11547
Competitive forces	100	4.0800	1.01185	.10118
Customer Demand for products and services	100	4.0500	1.20918	.12092
Industry Trends	100	3.8200	1.32100	.13210

Macroeconomic Indicators	100	4.2300	1.12685	.11269
Corporate Strategy	100	4.0700	1.13933	.11393
Financial reporting systems	100	4.1700	1.00559	.10056
Risk management strategies	100	4.5200	.65874	.06587
Financial forecasting techniques	100	4.3100	.91778	.09178
Budgeting processes	100	4.0900	1.12002	.11200
Strategic Objectives	100	4.1100	1.15378	.11538

Table 2: One-Sample Statistics

The above table shows that all the mean values are above 4. Likert scale 4 is for fair impact.

	Test Value = 3					
					95% Confidence Interval of the Difference	
	t	df	Sig. (2-tailed)	Mean Difference	Lower	Upper
Global Economic Trends	11.301	99	.000	1.17000	.9646	1.3754
Regulatory Environment:	8.660	99	.000	1.00000	.7709	1.2291
Competitive forces	10.674	99	.000	1.08000	.8792	1.2808
Customer Demand for products and services	8.684	99	.000	1.05000	.8101	1.2899
Industry Trends	6.207	99	.000	.82000	.5579	1.0821
Macroeconomic Indicators	10.915	99	.000	1.23000	1.0064	1.4536
Corporate Strategy	9.391	99	.000	1.07000	.8439	1.2961
Financial reporting systems	11.635	99	.000	1.17000	.9705	1.3695
Risk management strategies	23.074	99	.000	1.52000	1.3893	1.6507
Financial forecasting techniques	14.274	99	.000	1.31000	1.1279	1.4921
Budgeting processes	9.732	99	.000	1.09000	.8678	1.3122
Strategic Objectives	9.621	99	.000	1.11000	.8811	1.3389

Table 3. One-Sample Test

The table shows that P values are lesser than 0.05 and the mean differences are positive. With this we can reject the null hypothesis and accept that there is a difference between the actual mean and hypothesized mean. It also shows that "Several factors influence financial planning and forecasting of Indian MNCs".

	Firmly Disagree		Disagree		Neutral		Agree		Firmly Agree	
	Count	Row N %	Count	Row N %	Count	Row N %	Count	Row N %	Count	Row N %
It enables them to develop effective strategies for managing their finance	7	7.0%	11	11.0%	10	10.0%	28	28.0%	44	44.0%

Companies can identify areas where they need to make changes or adjustments in order to maximize profits and minimize risks.	6	6.0%	7	7.0%	9	9.0%	29	29.0%	49	49.0%
It helps them plan for future growth by forecasting potential changes in the market and developing strategies to overcome them.	2	2.0%	6	6.0%	9	9.0%	39	39.0%	44	44.0%
Financial planning and forecasting also help Indian MNCs to remain competitive by understanding industry trends, customer preferences, macroeconomic indicators, etc., which can impact their operations or profitability.	4	4.0%	4	4.0%	8	8.0%	25	25.0%	59	59.0%
It enables companies to make informed decisions	6	6.0%	13	13.0%	15	15.0%	17	17.0%	49	49.0%
Useful in managing investments	10	10.0%	11	11.0%	10	10.0%	26	26.0%	43	43.0%
Debt Management	4	4.0%	6	6.0%	7	7.0%	29	29.0%	54	54.0%

Table no 4. Importance of financial planning and forecasting

7% of the respondents firmly disagreed that finance management enabled them to develop effective strategies for managing their finances, 11% disagreed, 10% were neutral, 28% agreed and 44% firmly agreed. The results suggest that most people are generally confident in their financial management skills and believe they can develop effective strategies to manage their finances.

6% of the respondents firmly disagreed that companies could identify areas where they need to make changes or adjustments in order to maximize profits and minimize risks, 7% disagreed, 9% were neutral, 29% agreed and 49% firmly agreed. The results suggest that most people believe companies have the capabilities to make effective changes in order to improve their businesses.

2% of the respondents firmly disagreed that financial management helps companies plan for future growth by forecasting potential changes in the market and developing strategies to overcome them, 6% disagreed, 9% were neutral, 39% agreed and 44% firmly agreed. The results suggest that most people understand the importance of financial management in planning for future growth and believe it can be used to anticipate and react to changes in the market.

Financial planning and forecasting also help Indian MNCs to remain competitive by understanding industry trends, customer preferences, macroeconomic indicators, etc., which can impact their operations or profitability.

4% of the respondents firmly disagreed that financial planning and forecasting help Indian MNCs to remain competitive by understanding industry trends, customer preferences, macroeconomic indicators, etc. 4% disagreed, 8% were neutral, 25% agreed and 59% firmly agreed. The results suggest that most people recognize the value of financial planning and forecasting in helping Indian MNCs remain competitive in the global market.

6% of the respondents firmly disagreed that financial management enables companies to make informed decisions, 13% disagreed, 15% were neutral, 17% agreed and 49% firmly agreed. The results suggest that most people believe that financial management is essential in helping companies make sound and informed decisions.

10% of the respondents firmly disagreed that financial management is useful in managing investments, 11% disagreed, 10% were neutral, 26% agreed and 43% firmly agreed. The results suggest that people generally understand the importance of financial management in helping manage investments and are confident in their ability to do so.

4% of the respondents firmly disagreed that financial management is valuable in debt management, 6% disagreed, 7% were neutral, 29% agreed and 54% firmly agreed. The results suggest that most people recognize the importance of financial management in managing debt effectively and see it as an essential tool.

In conclusion, these results indicate that most people recognize the value of financial management and its various applications in helping companies improve their businesses, forecast potential changes in the market, remain competitive, make informed decisions, manage investments and manage debt effectively. Financial management is seen as an essential tool for any business's success.

In order to achieve these goals, it is important that companies have the right people in place to effectively manage their finances. Companies should ensure that they recruit, retain and train financial professionals who are knowledgeable in accounting, finance, financial analysis and forecasting. By investing in staffing the right personnel to manage their finances, companies will be able to maximize their chances of achieving long-term success.

In addition to this, companies should also invest in technology that can help them streamline financial processes and make better decisions more quickly. This could include software such as enterprise resource planning systems or analytics tools that can help analyse data quickly and accurately. By leveraging technology solutions to improve their financial management capabilities, companies can remain competitive and be better prepared for any unforeseen changes in the market.

One-Sample Statistics				
	N	Mean	Std. Deviation	Std. Error Mean
It enables them to develop effective strategies for managing their finance	100	3.9100	1.27204	.12720
Companies can identify areas where they need to make changes or adjustments in order to maximize profits and minimize risks.	100	4.0800	1.18646	.11865
It helps them plan for future growth by forecasting potential changes in the market and developing strategies to overcome them.	100	4.1700	.96457	.09646
Financial planning and forecasting also help Indian MNCs to remain competitive by understanding industry trends, customer preferences, macroeconomic indicators, etc., which can impact their operations or profitability.	100	4.3100	1.05117	.10512
It enables companies to make informed decisions	100	3.9000	1.30655	.13065
Useful in managing investments	100	3.8100	1.36104	.13610
Debt Management	100	4.2300	1.08110	.10811

Table 5. One sample statistics.

From the above table we can see that all the mean values are around 4.0. This means that there is a certain level of agreement regarding the statements shown.

| | Test Value = 3 | | | | | |
| | t | df | Sig. (2-tailed) | Mean Difference | 95% Confidence Interval of the Difference | |
					Lower	Upper
It enables them to develop effective strategies for managing their finance	7.154	99	.000	.91000	.6576	1.1624
Companies can identify areas where they need to make changes or adjustments in order to maximize profits and minimize risks.	9.103	99	.000	1.08000	.8446	1.3154
It helps them plan for future growth by forecasting potential changes in the market and developing strategies to overcome them.	12.130	99	.000	1.17000	.9786	1.3614
Financial planning and forecasting also help Indian MNCs to remain competitive by understanding industry trends, customer preferences, macroeconomic indicators, etc., which can impact their operations or profitability.	12.462	99	.000	1.31000	1.1014	1.5186
It enables companies to make informed decisions	6.888	99	.000	.90000	.6408	1.1592
Useful in managing investments	5.951	99	.000	.81000	.5399	1.0801
Debt Management	11.377	99	.000	1.23000	1.0155	1.4445

Table 6. One sample T test.

The above table shows that all the P Values are lesser than 0.05. The mean differences are positive and thus we can reject the null hypothesis. This also proves the hypothesis that "Planning and forecasting activities are the most significant aspects in corporate finance among Indian MNCs."

Conclusion

In conclusion, these results suggest that most people recognize the importance of financial management and its various applications in helping companies improve their businesses, forecast potential changes in the market, remain competitive, make informed decisions, manage investments and manage debt effectively. Companies should ensure that they invest in staffing the right personnel to manage their finances as well as leveraging technology solutions to improve their financial management capabilities. This will help them maximize their chances of achieving long-term success. Overall, financial management is seen as an essential tool for any business's success.

This survey has provided insight into the impact that various factors can have on financial planning and forecasting. From this, it is clear that factors such as degree of operating leverage, financing needs, budgeting processes, financial reporting systems, risk management strategies and financial forecasting techniques all play a key role in determining the success of business plans and forecasts. In order to ensure effective decisions are made regarding future investments and other operations, businesses must take into account these factors when making predictions about their future.

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TO STUDY THE SUBSTANTIAL INFLUENCE OF INVESTOR'S PERCEPTION AND BEHAVIOUR ON MUTUAL FUND INVESTMENT- REVIEW OF LITERATURE

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ABSTRACT
A mutual fund is a particular kind of expertly managed collective investment scheme that generates revenue from numerous people to buy securities. Investors' perceptions of the key measures swings, stock market declines, mutual fund issues, reasons for choosing a certain firm, considerations when choosing a mutual fund, and satisfaction with mutual funds are on the middle side. The study is based on secondary data from a review of the literature and investigates how well-informed, how they feel about mutual funds, what they like, and how satisfied they are with them. The findings of the research will be used to analyse mutual funds further extensively and to select the best mutual funds possible in order to maximize returns.
Keywords: Mutual Fund, Investor, Perception, behaviour, emotional appeal

Introduction
A mutual fund is a specialized or efficiently administered communal investment product that raises funds by multiple people to buy securities. Investing in mutual funds is interesting to small investors due to their versatile investment alternatives. In order to expand knowledge about investing in mutual funds among women investors, mutual fund companies must first determine what needs to be improved. With respect to investment behaviour, the current study examines mutual fund investments. The perceptions and understandings of investors have been studied in relation to a variety of subjects, including the type of mutual fund, the primary reason for making an investment in mutual fund product lines, the mechanism of financial professionals and brokers, the factors that investors believe encourage them to invest in mutual funds, the sources of information etc.

Review of Literature
Sing, (2019) says that professionals demand a better return for less investment since they have limited time and resources. The lack of conceptual knowledge and insufficient time for problem-solving has been the important challenges that most investors encountered. Experts nowadays recognize mutual funds as a solid complement to fixed-income securities for investments. Keerthana, Nidheesh & Balasubramanian (2019) says that well-informed investors are about mutual funds, whether considerations they keep in mind when making an investment, and which asset management firms and fund strategies are most popular. Muthalif & Munivel (2019) says that an investment portfolio is a trust that pools the savings of many investors who have similar financial objectives. These are mutual funds that can be used to invest across several asset classes, including fixed income and shares.

Ainapur (2018) says that it might be difficult for stock brokers to educate the general public about mutual funds and demonstrate to them how their money is best managed by an asset manager depending on their capacity for risk. Pallavi & Sharma (2018) says that how mutual funds marketing communications, such as logical and emotional requests, influence consumer's attitude and product purchase behaviour. Among opposition to the inspiring, psychologically motivating advertisement, the rational advertisement breeds uncertainty and uneasiness in viewers.

Udhayasankar and Maran (2018) says that investigators attempt to comprehend how investors feel about particular mutual funds in this study. Additionally, researchers look for several elements influencing how investors see investing in mutual funds. The research will be useful in identifying the investors' enthusiasm

grounds and motivating factors. It demonstrates that contributors see mutual funds as a flexible asset allocation that generates interest in shareholders.

Punithavathi (2018) says that the study's primary goal is to examine how investors see mutual funds, why they favour them, and how long they plan to invest in one. Friends and family, Social media & advertising both play significant roles in raising awareness of mutual funds. Financial advisors and mutual fund agents play a smaller influence in this subject area than informal networks. When compared to investing in shares, people prefer investments in this country for their high returns and safety. Since they are low-income, these individuals also like mutual funds for their ability to save money over tax advantages. They favour a long-term investing strategy and prefer a systematic investment plan over a one-time investment strategy based on their monthly income.

Anjaneyulu & Rao (2017) reveals that the purpose of this research are on the variables that motivate individual consumers to invest in MF schemes. It discusses a variety of topics, including the type of fund one prefers to invest in, issues faced by mutual fund investors, investor awareness of lifestyle factors, and a statistical analysis was used to determine a relationship between variables influencing mutual fund investment and investor motivational factors that raise satisfaction levels. Based on the results, it is abundantly obvious that financial institutions must take such factors into consideration when creating mutual fund products to draw investors from underdeveloped locations like Mahabubnagar town.

Goel and Khatik (2017) indicates that the major goal of this study is to determine how investors feel about and choose mutual funds as an investment alternative. Most investors, the study finds, have heard of mutual funds, but a sizable portion of them have not started investing because they lack complete knowledge of mutual funds.

Sagarmatha & Roa (2017) reveals that this study concentrated on a variety of variables that illustrate how participants invest in mutual funds. Furthermore, researchers try to comprehend how investors in the future are toward mutual funds. This study has a descriptive focus. Combining primary and secondary sources were used to support this research. According to the study's researcher, social networks and advertising have boosted people's awareness of mutual funds. In comparison to other financial sectors, this research revealed that mutual funds got engaged much more frequently.

Swain and Dash (2017) says that the study sheds light on the many kinds of risks included in a mutual fund scheme. Investors in this industry who invest in mutual funds and non-mutual funds provided the data. The study is concerned with how liquidity, financial literacy, and demographics relate to investing decisions. Low-risk investments and fund liquidity were found to influence investors' perceptions of mutual fund investing.

Pandian (2017) reveals that in the study area of Virudhunagar district, the researcher made an effort to analyse the socioeconomic factors impacting investors' perceptions about mutual funds as investments. This study is crucial for assessing investors' perceptions in a market like the Virudhunagar area, where competition is escalating daily as more competitors enter the market with varying financial capabilities and business models. This paper investigated the demographic circumstances of mutual fund investors and how they see the funds in six different ways.

Objectives Of The Study:
1. To study the overview of the Mutual fund industry in India.
2. To identify and analyse the factors influencing investors to invest in mutual funds as an investment tool.
   To examine the investor's attitude towards mutual funds as an investment tool.
3. To examine the perception of mutual fund investors towards mutual fund investment.

Scope Of The Study
As the aim of the study is to find out the perception of different investors towards the mutual fund, we have taken in India to find out the investment pattern, perception, attitude, and reasons for investing in a mutual fund. The Scope of the study is that this report can be used in further studies by the researchers. This study is a cross-sectional study, if it is conducted in a longitudinal way then results may differ, then further researchers can consider this study with different regions and variables in the study.

Key Findings:
1. Insufficient theoretical knowledge and insufficient time for dilemma were the key issues that most investors experienced.

2. The sum of cash saved by individuals that invest in financial assets like shares or bond funds with a similar economic objective.
3. Risk segmentation is made possible. Primary prevention, cash flow, accessibility, efficiency, versatility, and novelty are all positives of investing in MF.
4. Among the various Schemes launched by the MFs, the customer must select the best MF management companies as well as the appropriate schemes.
5. The asset manager best manages their funds based on their ability for risk-taking.
6. Whether investment decisions are influenced by variables including cash flow, financial education, and population.
7. It has been observed that investors' perceptions of mutual fund investment are influenced by relatively safe funds and the liquidity of investment products.
8. Risk segmentation is provided. The advantages of investing in MF include primary prevention, transparency, cost, accessibility, customization, and novelty.
9. Among the different schemes that the MFs have launched, the customer must select the greatest MF management organizations and the best programmes.
10. The emotional and logical arguments in mutual fund advertisements influence consumer attitudes and product purchases.

Conclusion & Suggestions

Inside this research, several characteristics are emphasized that demonstrate what investors perceive and act when buying mutual funds. Stock markets are increasing in the current business environment; consequently, investors should keep onto their assets for a long time while taking into account the risk level and their saving habits. To reduce business risk, investors should seek the guidance of private financial advisers and keep clear from volatile elevated products. Before making any kind of investment, they should take the time to gather all the necessary information that is available. The investor should conduct an adequate risk analysis and routine reviews. For each and every transaction, investors should keep precise records. In order to adequately cover their bases in case of unforeseen circumstances, buyers should also attempt to invest a reasonable portion of their capital in liquid securities. In order to increase investor trust and encourage people to take the initiative to engage in mutual funds, the researcher recommends businesses and the government to take steps to improve investor literacy and train advisors in this area. The results of this research revealed a substantial influence of investor perception and behaviour on mutual fund investment preferences. Thus, in addition to just providing their customers with the maximum possible return, the other companies must enhance their mutual fund offerings by integrating numerous investment channels.

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YOGA AND TOURISM: A PHENOMENOLOGICAL ANALYSIS OF INTENTIONS

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ABSTRACT
Even though yoga tourism is a niche market in India, it is expanding and changing. Improved health and wellness are becoming increasingly important to people all over the world. New business opportunities in this underserved market can be opened by gaining an understanding of their requirements, attitude, and behavior toward yoga tourism. With the rise of the "travel to feel well" trend, yoga tourism has emerged and grown. The reasons for yoga tourism were discussed and explained in this study. The primary data from 421 respondents were gathered through the use of a questionnaire that was developed in a structured and unambiguous manner. The study found that tourists are more likely to participate in yoga tourism when they are pleased, curious about culture, spirituality, and religion.
Keywords: Yoga tourism, pleasure, culture, spirituality, and religion.

Introduction
India is known as the spiritual capital of the world, and it's no surprise that yoga tourism is a popular activity for travellers visiting the country. Yoga, an ancient practice that originated in India, has gained worldwide popularity in recent years for its physical and mental health benefits.

There are many places in India where visitors can immerse themselves in the practice of yoga, learn from experienced teachers, and experience the rich culture and history of the country. Some popular destinations for yoga tourism in India include Rishikesh, Goa, and Mysore.

Rishikesh, also known as the "Yoga Capital of the World," is situated on the banks of the Ganges River and is considered one of the holiest cities in India. It is home to many ashrams and yoga centers where visitors can attend yoga classes, participate in meditation and spiritual workshops, and even live in the ashram for a period. Some popular ashrams in Rishikesh include Parmarth Niketan, Sivananda Ashram, and the Beatles Ashram.

Goa is another popular destination for yoga tourism in India. The state is known for its beautiful beaches, vibrant culture, and delicious food. Visitors can find many yoga centers and retreats in Goa, where they can practice yoga in a serene and peaceful environment. Some popular yoga centers in Goa include Mandala Yoga Ashram, Agonda Yoga Center, and The Yoga Institute Goa.

Mysore is another city in India that is considered a hub for yoga tourism. The city is known for its traditional style of Ashtanga Yoga, which is taught in a specific sequence of postures. Many yoga students come to Mysore to study Ashtanga Yoga under the guidance of experienced teachers. Some popular yoga centers in Mysore include the Shri K Pattabhi Jois Ashtanga Yoga Institute and the R. Sharath Jois Yoga Shala. In addition to these destinations, there are many other places in India where visitors can experience yoga tourism. From the Himalayas to the beaches of South India, there are many opportunities to practice yoga in different settings and with different teachers.

Overall, yoga tourism in India offers visitors the opportunity to deepen their yoga practice, learn from experienced teachers, and experience the rich culture and history of the country. With so many destinations and options to choose from, there is something for everyone in the land of Yoga.

History of yoga tourism in India
Yoga tourism in India has a long and rich history, as the practice of yoga originated in the country thousands of years ago. In ancient times, yogis and spiritual seekers would travel to India to study with enlightened masters, and the tradition of yoga tourism has continued to the present day.

In the early 20th century, yoga began to gain popularity in the Western world, and more and more people started to travel to India to study yoga and learn about its spiritual traditions. In the 1960s and 1970s, the counterculture movement in the West brought a renewed interest in Eastern spirituality and yoga, and many young people

travelled to India to seek spiritual enlightenment. During this time, many Westerners also began to establish ashrams and yoga centers in India, and these places became popular destinations for yoga tourists. Some of the most famous ashrams from this period include the Beatles Ashram in Rishikesh, the Osho Ashram in Pune, and the Sivananda Ashram in Trivandrum.

In recent years, yoga tourism in India has continued to grow in popularity, as more and more people seek to improve their physical and mental well-being through the practice of yoga. Today, there are many yoga centers and retreats across the country that offer visitors the opportunity to deepen their yoga practice, learn from experienced teachers, and experience the rich culture and history of India. In addition to the traditional ashrams, there are now also many luxury resorts and hotels that offer yoga classes and wellness programs, catering to the increasing number of people who want to combine their yoga practice with a vacation.

Overall, yoga tourism in India has a long and rich history and continues to be a popular activity for travellers to the country. With so many destinations and options to choose from, it is no surprise that people from around the world come to India to deepen their yoga practice, learn from experienced teachers, and experience the rich culture and history of the country.

Literature review

There are some related papers in the literature. Yoga tourism has emerged as an important component of the trend known as "travel to feel good." Additionally, yoga tourism can be considered a subset of health tourism. Yoga implies the integration of the mind, body, and spirit. Yoga is widely recognized as a means of reducing stress, strengthening the body, and increasing adaptability. By analysing the motivations of tourists visiting Rishikesh, Charak, Sharma, and Chib (2021) are focusing on the connections between wellness, otherworldliness, and yoga tourism.

In addition to becoming well-known as a form of tourism, yoga has expanded inexorably. According to Kunwar and Sharma (2020), a lot of Westerners travel to India, the birthplace of yoga, to protests, or to yoga retreats in other countries. This is also the case in Turkey, where yoga has emerged as a significant movement. Even though yoga tourism is getting more and more attention, there haven't been many studies done on it, especially ones that are comparable to its social effects. Therefore, the purpose of the study by Znalbant and Alvarez (2020) was to shed light on the social aspects of yoga tourism. According to the findings, there are three types of yoga trips. Health-centered, engaged yoga, and social tourism-centered social tourism. These include a variety of accents and experiences, as well as varying degrees of community collaboration and potential benefits for locals. The investigation also identifies a few problems, such as validity, particularly in root objections.

Maharani, Parta, and Supriadi (2020) examined the factors that are affecting yoga tourism in Bali and sought to develop a conceptual model of the factors that influence yoga tourism. Due to its combination of modern yoga and a favorable yoga environment, Bali's yoga tourism potential had increased. Using the push and pull factors as independent variables and tourists' satisfaction and motivations as a mediating variable, a conceptual framework was developed based on the key variables. The framework had aided in identifying the most compelling reasons for tourists to choose Bali as a yoga tourism destination. Stakeholders will be better able to effectively manage resources to support yoga tourism in Bali if they have a better understanding of the motivation behind it. The paper comes to the conclusion that in order to develop Bali as a destination for yoga tourism, it is extremely important to identify these motivations and have a strategic plan in place to make it optimal and sustainable.

McCartney (2019) has developed the relationship between a yoga tourist, pilgrim, and tourist-pilgrim and how one's expectations, goals, and imagination mediated subjective, embodied experience. The focus was on understanding how yoga practitioners' experiences can reveal differences between tourists and religious people. The study found that a person's personal experience can reflect differently on how they can be both a tourist and a pilgrim and how the body can be changed during a pilgrimage.

The purpose of the paper published by Telej and Gamble (2019) is to examine the advertising strategies India is using to establish itself as a serious yoga destination. A meeting-based information collection method, a subjective system, and a constructivist research worldview made up the methodological methodology. Ten semi-organized meetings were held both inside and outside with yoga experts from various foundations and levels who had traveled to India for yoga tourism. Due to the fact that, as the investigation has revealed, various impressions of yoga comprise the reason for specific limited-time procedures, the findings confirmed that understanding yoga tourism is crucial in the decision of showcasing the approach received by objections offering yoga withdrawals. By studying larger groups of more experienced yoga practitioners from various

nations or foundations, perhaps through close means, future research could expand the sample size and socioeconomics of the current study.

A study led by Sharma and Nayak (2019) experimented with a hypothetical model that predicted the immediate and negative effects of critical tourism experiences (MTEs) on social goals through objective pictures and travelers' satisfaction with yoga tourism. This investigation was guided by data gathered from 502 Indian tourists visiting Rishikesh. Findings based on corroborative factor analysis and SPSS full scale (PROCESS) confirmed that MTEs had a direct and indirect impact on conduct goals through the satisfaction of observers and the objective picture. In yoga tourism, MTEs were found to be the most grounded influencer of social expectations. This investigation debunks the claims made by scientists and experts that travelers' happiness alone is the most important factor in objective execution.

Due to the shifting perception of otherworldliness in the Western world, yoga tourism has recently gained popularity and significance. However, there is a lack of research on this marvel. Dillette, Douglas, and Andrzejewski (2019) study investigated yoga tourism but came up with measures of positive mental well-being. Twelve semi-organized meeting records were dissected using deductive topical investigation. The presence of five deduced measurements associated with positive mental health and their connection to extraordinary experiences were discovered through research. This study provided evidence that yoga tourism creates an environment in which yoga tourists can experience positive mental well-being both during and after their trip. According to the findings, yoga tourism has the potential to alter the lives of its participants to varying degrees. It is justifiable to conduct additional research on these discoveries in a larger wellness tourism setting.

Identification of literature gap

A literature review on yoga tourism would examine the various studies and research that have been conducted on the topic, in order to gain a deeper understanding of the current state of yoga tourism, its benefits, challenges, and future possibilities. Overall, the literature suggests that yoga tourism is a rapidly growing industry, with an increasing number of people traveling to different countries, including India, to deepen their yoga practice, learn from experienced teachers, and experience the rich culture and history of the place. Studies also show that yoga tourism can have a positive impact on the economy of the host countries, as well as on the mental and physical well-being of tourists.

However, some challenges have also been identified in the literature, such as the commercialization of yoga, the lack of standardization of yoga teacher training, and the potential negative impact on local communities. Additionally, research suggests that there is a lack of understanding and marketing of yoga tourism and that the industry could benefit from more research and data analysis.

Finally, the literature points to the potential for yoga tourism to be used as a tool for sustainable development, with benefits for both tourists and host communities. Future research could explore the ways in which yoga tourism can be developed in a sustainable and responsible manner. In summary, a literature review on yoga tourism would reveal that the field is growing, has many benefits, but also some challenges and areas for improvement, and has the potential for sustainable development.

Objectives of the study

The objectives of yoga tourism can vary depending on the traveler's perspective, but some common ones include:

1. To deepen one's yoga practice: Many people who engage in yoga tourism are looking to improve their physical and mental well-being through the practice of yoga, and seek out experienced teachers and authentic environments to do so.
2. To learn about the history and culture of yoga: For some, yoga tourism is an opportunity to learn about the history and culture of yoga, and how it has evolved over time. They may be interested in studying different styles of yoga, such as Ashtanga, Hatha, and Kundalini, and understanding their roots.
3. To experience the culture and history of the host country: Yoga tourism can also provide the opportunity to experience the rich culture and history of the host country, such as India, which is considered the spiritual capital of the world.
4. To gain a sense of inner peace and tranquillity: Many people seek yoga tourism to gain a sense of inner peace and tranquillity, which they can then take back home with them.
5. To have a spiritual journey: For some, yoga tourism is a spiritual journey, an opportunity to connect with the higher self, meditate, and have a deeper understanding of their existence.
6. To combine yoga and vacation: Many people seek to combine the practice of yoga with a vacation and look for luxury resorts and hotels that offer yoga classes and wellness programs.

Overall, the objectives of yoga tourism can be diverse and personal, but generally, it is an opportunity for individuals to improve their physical and mental well-being, learn more about the history and culture of yoga, and experience the culture and history of the host country.

In spite of a global recession, the World Travel and Tourism Council reports that Indian tourism revenue increased by 6.9% to nearly $42 billion in 2010. This contrasts with a stagnant global tourism industry over the same time. While international visitors also played a significant role in the industry's expansion, domestic tourism accounted for a significant portion of the expansion as more Indians travelled to other parts of the country. India receives just over five million international visitors annually, which is less than 1% of all international travel worldwide. However, Indian visitors spend almost twice as much as the average international visitor. India gains employment, foreign currency, and infrastructure development from tourism. India's tourism industry employs more than 20 million people. Hotels, transportation, tourist attractions, and tour companies are all examples of this. Restaurants and retail establishments are examples of indirect beneficiaries. The country's trade balance is helped by the over $11 billion in foreign currency that tourism brings in. The development of infrastructure, such as hotel construction, airport enhancements, and ground transportation systems, is another advantage.

Even though yoga tourism is a very small part of the tourism industry, it still has the potential to attract a lot of customers. This study will highlight the sector from the perspective of consumers, which will help policymakers design strategies in the same direction.

In light of the preceding discussion, the following goals have been planned for research:
1. To determine the motivating factors that influence yoga tourists.
2. To recognize issues and obstacles related to yoga tourism.

Hypotheses of the study
The researchers have decided to test the following hypotheses in light of the aforementioned discussions and the study's stated objectives:
1. H_1: Yoga tourism is influenced by pleasure.
2. H_2: Yoga tourism is influenced by a curiosity about culture.
3. H_3: Yoga tourism is influenced by a curiosity about spirituality.
4. H_4: Yoga tourism is influenced by a curiosity about religion.

Research methodology
The present study employs a descriptive research design with large sample size and a survey method. The data set was initially screened for missing values and incorrect data entry. The data set's normality and outliers were examined. As previously suggested, a one-sampled t-test analysis was used to validate the hypotheses.

With items from validated scales for measuring physical health, spiritual health, stress influences, life influences, and destination features, researchers have developed and used structured and undisguised questionnaires. In order to determine the relevancy of the questions, respondents' willingness to share the information, their comprehension of the questions, the ease and time required to complete the questionnaire, and the likely range of responses, researchers tested the questionnaire through a pilot survey.
The researchers selected samples from yoga tourists using the convenience sampling method. The convenience sampling technique is a statistical method for selecting volunteers based on how easy it is for them to volunteer or units based on their availability or ease of access. With the assistance of field reviewers and Google forms, the researcher distributed 750 questionnaires. The researcher has received 421 appropriate responses as a result, representing a response rate of 56.13 percent. According to Hair, Anderson, Tatham, and Black (1998), this sample size is larger than the minimum that is recommended.

Results
One-Sample t-test was used by the researchers in this study to confirm the hypotheses they had proposed. However, prior to that, content validity and reliability statistics have been examined by researchers to guarantee the instrument's suitability.

Content validity
The relevant literature review about the study ensures content validity. With the assistance of a panel of experts made up of professors, a pilot study of the questionnaire was conducted, and any necessary modifications were made to the instrument's questions to improve their content and clarity. In addition, the questionnaire was put through a pilot test with sample respondents outside of the final study.

Reliability statistics

The questionnaire's reliability is assessed using Cronbach's Alpha reliability method. The questionnaire's satisfactory reliability is demonstrated by its moderately significant reliability coefficient of 0.815. The SPSS software was used to conduct the reliability test, and the following metrics were used:

Cronbach's Alpha	N of Items
.815	14

Table 1: Reliability Statistics

		Frequency	Percent	Cumulative Percent
Age	Less than 25	156	37.1	37.1
	25 to 35	63	15	52
	35 to 45	127	30.2	82.2
	45 and above	75	17.8	100
Gender	Male	254	60.3	60.3
	Female	167	39.7	100
Occupation	Service	146	34.7	34.7
	Self Employed	236	56.1	90.7
	Others	39	9.3	100
Nationality	Indian	365	86.7	86.7
	Non-Indian	56	13.3	100

Table 2: Demographic Profile of the Respondents'

The above table is showing the frequency, percent, and cumulative percent of various demographic characteristics of a group of participants. The characteristics shown are age, gender, occupation, and nationality.

- Age: Most of the participants (37.1%) are less than 25 years old, followed by 25 to 35 years old (15%), 35 to 45 years olindicatingbove (17.8%).

- Gender: Most of the participants are male (60.3%), while 39.7% are female.

- Occupation: 34.7% of the participants are service, 56.1% are self-employed, and 9.3% fall under the category of "others".

- Nationality: The majority of the participants are Indian (86.7%), while 13.3% are non-Indian.

The table allows one to have a general idea of the demographic characteristics of the group of participants and could be useful for further analysis and research.

Validation of hypotheses

1. H_1: Yoga tourism is influenced by pleasure.

	N	Mean	Std. Deviation
Pleasure	421	3.90	.60

Table 3: One-Sample Statistics

	Test Value = 3					
					95% Confidence Interval of the Difference	
	t	*df*	Sig. (1-tailed)	Mean Difference	Lower	Upper
Pleasure	30.77	420	.000	.9000	.8425	.9575

Table 4: One-Sample Test

The above table shows the results of a t-test comparing the mean difference in pleasure scores between the two groups. The test value is 3, which indicates that there is a significant difference between the groups in terms of pleasure scores. The 95% confidence interval of the difference shows that the mean difference in pleasure scores indicates .8425 and an upper bound of .9575. The t-value (30.77) is larger than the critical value (t-value) for a given significance level (0.000) and degree of freedom (420) which means that the difference in pleasure scores is statistically significant at the 0.05 level. The results suggest that there is a significant difference in pleasure scores between the two groups, with one group scoring higher on pleasure than the other. Thus, it can be concluded that yoga tourism is influenced by pleasure.

H$_2$: Yoga tourism is influenced by a curiosity about culture.

	N	Mean	Std. Deviation
Culture	421	3.82	.63337

Table 5: One-Sample Statistics

	Test Value = 3					
					95% Confidence Interval of the Difference	
	t	*df*	Sig. (1-tailed)	Mean Difference	Lower	Upper
Culture	26.70	420	.000	.8200	.7596	.8804

Table 6: One-Sample Test

The above table shows the results of a t-test comparing the mean difference in culture scores between the two groups. The test value is 3, which indicates that there is a significant difference between the groups in terms of culture scores. The 95% confidence interval of the difference shows that the mean difference in culture scores is .8200, with a lower bound of .7596 and an upper bound of .8804. The t-value (26.70) is larger than the critical value (t-value) for a given significance level (0.000) and degree of freedom (420) which means that the difference in culture scores is statistically significant at the 0.05 level. The results suggest that there is a significant difference in culture scores between the two groups, with one group scoring higher on culture than the other. Thus, it can be concluded that yoga tourism is influenced by a curiosity about culture.

H$_3$: Yoga tourism is influenced by a curiosity about spirituality.

	N	Mean	Std. Deviation
Spirituality	421	3.7831	.70531

Table 7: One-Sample Statistics

	Test Value = 3					
					95% Confidence Interval of the Difference	
	t	df	Sig. (2-tailed)	Mean Difference	Lower	Upper
Spirituality	22.86	420	.000	.7800	.7129	.8471

Table 8: One-Sample Test

The above table shows the results of a t-test comparing the mean difference in spirituality scores between the two groups. The test value is 3, which indicates that there is a significant difference between the groups in terms of spirituality scores. The 95% confidence interval of the difference shows that the mean difference in spirituality scores is .7800, with a lower bound of .7129 and an upper bound of .8471. The t-value (22.86) is larger than the critical value (t-value) for a given significance level (0.000) and degree of freedom (420) which means that the difference in spirituality scores is statistically significant at the 0.05 level. The results suggest that there is a significant difference in spirituality scores between the two groups, with one group scoring higher on spirituality than the other. Thus, it can be concluded that yoga tourism is influenced by a curiosity about spirituality.

H$_4$: Yoga tourism is influenced by a curiosity about religion.

	N	Mean	Std. Deviation
Religion	421	4.0147	.88786

Table 9: One-Sample Statistics

	Test Value = 3					
					95% Confidence Interval of the Difference	
	t	df	Sig. (2-tailed)	Mean Difference	Lower	Upper
Religion	23.5494	420	.000	1.0100	.9257	1.0943

Table 10: One-Sample Test

This table is presenting the results of a t-test that compares the difference in means between the two groups with a significance level of .05. The test statistic (t) is 23.5494 and the degrees of freedom (df) is 420. The p-value (Sig. (2-tailed)) is .000, which indicates that the difference in means between the two groups is statistically significant. The mean difference between the two groups is 1.0100, and the 95% confidence interval for this difference is between .9257 and 1.0943. This means that we are 95% confident that the true difference in means between the two groups falls within this range. Thus, it can be concluded that yoga tourism is influenced by a curiosity about religion.

Findings of the study
Yoga tourism is increasingly influenced by pleasure, as more and more people seek to combine their yoga practice with a vacation. Yoga retreats and vacations have become more popular, with a variety of luxury resorts and hotels offering yoga classes and wellness programs. These vacations provide an opportunity for individuals to take a break from their daily lives, relax, and immerse themselves in their yoga practice while also enjoying all the amenities and activities that a vacation has to offer. The idea of a yoga vacation is to not only improve physical and mental well-being but also to indulge in pleasure and relaxation. Yoga vacations can range from

beachfront retreats to mountain getaways, and the locations are often chosen to provide a serene and scenic setting that complements the practice of yoga. The combination of yoga, pleasure, and vacation allows individuals to feel refreshed, rejuvenated, and balanced.

Yoga tourism is also influenced by a curiosity about culture. The practice of yoga originated in India, and many people travel to the country to learn about its spiritual traditions and to experience the rich culture and history of the place. Yoga tourists may be interested in studying different styles of yoga, such as Ashtanga, Hatha, and Kundalini, and understanding their roots. They may also be interested in learning about the spiritual practices, such as meditation and pranayama, and how they are integrated into daily life in India. Additionally, many people are drawn to the ancient temples and holy places in India, and they may visit these sites as part of their yoga tourism experience. They may also be interested in experiencing the local cuisine, traditional festivals and ceremonies, and the local way of life. The interest in culture allows the tourists to have a more holistic experience and gain a deeper understanding of the country and its people.

Yoga tourism is heavily influenced by a curiosity about spirituality. Yoga is not only a physical practice but also a spiritual one, and many people travel to different countries, including India, to deepen their spiritual understanding and connection through the practice of yoga. Many yoga tourists seek out ashrams and spiritual centers, where they can immerse themselves in the practice of yoga and learn from experienced teachers. They may participate in meditation and spiritual workshops and even live in the ashram for a period. Yoga tourists may also be interested in learning about different spiritual practices, such as mindfulness, self-inquiry, and self-discovery. Additionally, many people are drawn to the ancient temples and holy places in India, and they may visit these sites as part of their yoga tourism experience, to gain a deeper understanding of the spiritual roots of yoga and its connection to the culture and history of the country.

Yoga tourism is also influenced by a curiosity about religion. Yoga has its roots in ancient Indian philosophy, and it is often associated with Hinduism, Buddhism, and Jainism. Many people who engage in yoga tourism are interested in learning about the religious and spiritual traditions of India and how they relate to the practice of yoga. They may visit ancient temples and holy sites, such as those in Varanasi and Rishikesh, to learn more about the religious significance of these places and how they have influenced the development of yoga. Additionally, many yoga tourists may be interested in learning about the different religious and spiritual practices that are associated with yoga, such as puja (worship) and mantra recitation, and how they are integrated into daily life in India. The interest in religion allows the tourists to have a more holistic understanding of the practice of yoga and its connection to the culture and history of the country.

A researcher has also identified several issues and obstacles related to yoga tourism in India. The observation method and literature reviews have been used by researchers to identify issues and obstacles related to yoga tourism. Some of these include:

1. Commercialization of Yoga: With the growing popularity of yoga tourism, some ashrams and yoga centers have begun to commercialize their services, leading to a loss of authenticity and a lack of focus on the spiritual aspects of yoga.

2. Lack of standardization of Yoga teacher training: As the demand for yoga teachers has grown, there has been a lack of standardization in yoga teacher training, leading to a lack of qualified and experienced teachers in some areas.

3. Cultural Appropriation: Some visitors to India may not fully understand or respect the cultural and religious traditions associated with yoga, leading to cultural appropriation and disrespect.

4. Overcrowding: Popular yoga tourism destinations, such as Rishikesh and Goa, have seen an increase in visitors, leading to overcrowding and a negative impact on the local environment and communities.

5. Lack of understanding and marketing: There is a lack of understanding and marketing of yoga tourism in some areas, which can lead to a lack of tourism development and economic benefits for local communities.

6. Misrepresentation of Yoga: Some places may falsely promote themselves as Yoga centers without proper training, facilities or experienced teachers, leading to disappointment and dissatisfaction among tourists.

7. Environmental degradation: As yoga tourism grows, there is a risk of environmental degradation in popular destinations. Many yoga centers and retreats are located in environmentally sensitive areas, and their expansion can lead to damage to local ecosystems.

Overall, it's important for the yoga tourism industry to be developed in a sustainable and responsible manner, with consideration for the local communities, culture, and environment, and addressing these issues and obstacles could help achieve that.

Conclusion

Despite the fact that yoga is a niche activity in India, the travel industry market is expanding. Improved health and well-being are becoming increasingly important to people all over the world. The travel industry will open new advertising avenues in this underserved market by comprehending their requirements, demeanour, and behavior toward yoga. The "travel to feel good" model has spawned and developed the yoga travel industry.

Yoga is a Hindu concept that has been around since ancient times. Yoga consists of a series of exercises that help a person find the right balance between their mind, body, and spirit. Self-control and supplication are two aspects of contemplation. The yogis and sadhus of old practiced yoga and reflection as a way of life and as a means of achieving self-control and salvation. Dealing with one's faculties and cognition is the primary goal of yoga and reflection.

India's tourism industry is working hard to promote this traditional form of physical activity; Truth be told, yoga has been heavily promoted in India. Despite this, the travel industry hasn't fully investigated this particular strategy, which means it's losing out on opportunities to make more money.

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