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Thakur Educational Trust's (Regd.)  
**THAKUR COLLEGE OF SCIENCE & COMMERCE**

AUTONOMOUS COLLEGE AFFILIATED TO UNIVERSITY OF MUMBAI

NAAC Accredited with Grade 'A' (3<sup>rd</sup> Cycle) & ISO 9001: 2015 Certified

Best College Award by University of Mumbai for the Year 2018-2019



CELEBRATING  
25 YEARS OF GLORY

**DEPARTMENT OF MANAGEMENT STUDIES (B.M.S),  
M.COM.(E-COMMERCE) & IQAC**

**IN ASSOCIATION WITH UNIVERSITY OF MUMBAI & ICSSR**



Indian Council of  
Social Science Research

*presents*



**ONE-DAY INTERNATIONAL  
MULTIDISCIPLINARY CONFERENCE**

on

**TECHNOLOGY, INNOVATION &  
RESILIENT ENTREPRENEURSHIP :  
CATALYSTS FOR SUSTAINED  
BUSINESS EXCELLENCE**

**IMC-TIE 22**

**28<sup>th</sup> SEPT, 2022**

**WEDNESDAY**



**SAINIK**  
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## ABOUT THE COLLEGE



Thakur College of Science & Commerce laid its foundation in 1992 for the Junior College and its Degree College wing in 1997 under the aegis of Thakur Educational Trust. The college has been a Centre of Excellence by catering to traditional and modern education programmes in faculties of Science, Commerce and Arts at undergraduate and post graduate levels.

The College boasts of a strong and dedicated teaching staff, state of the art of infrastructure which includes Auditorium, Media Lab, Advanced and well-equipped Research Centre etc. with all the required amenities like Gymkhana, well-furnished Library etc. for the holistic growth of the learners. The exposure is also ensured through multiple industry partnerships and Foreign Universities collaborations. The Centre for Excellence – a collaborative Industry Alliance with JuriSearch provides a platform to the young budding Researchers with Industry experience and employment opportunities. The College fosters a strong sense of enquiry and exploration-based environment for its students. To support this experimentation pedagogy, the College has initiated The Patent and IPR Cell. This Cell administers the right balance for flourishing innovative and inventive ideas with monetising the same. In this regard the College has established The Innovation and Incubation Centre.

The Institution is a confluence of academic, sports and extracurricular enrichment for holistic development of its students. The Student-Run Associations, Fests and Fiestas, as well as its NCC, NSS, Sports, Cultural Wings have significantly added to the achievements of the institutions.

The College has accomplished spectacular growth over the last two decades of its journey towards “ Excellence in Education”. The College has been felicitated with “Pride of Maharashtra Award in 2022”, “Best College Award in 2018-2019 by University of Mumbai”, “Business Transformation Leaders Award, 2022 by The Economic Times Group”. TCSC has also featured as one of the top 10 Educational Institution across India in the Annual Coffee Book ‘Edupreneurs’ by the Times Group

for two consecutive years (2020 & 2021), for implementing Innovative Ideas in the field of Education. For its consistent performance and Excellence in Growing Personality through Education, the College has been felicitated as 'ICONS OF MUMBAI' (Western Suburbs) an award given by The Economic Times in April 2021. The college has also been featuring in the top ranking of various surveys conducted across the country consistently. Recently the College NSS unit was awarded with National Award for Best NSS Unit for the year 2020-2021 at the hands of Hon. President of India Smt. Droupadi Murmu at Rashtrapati Bhavan on 24<sup>th</sup> September, 2022

The Institution is ISO certified and follows a strict code of managerial efficiency. The NAAC Grade "A" in the 3<sup>rd</sup> Cycle and conferring with Autonomous Status from 2019-2020 reaffirms the commitment towards exceptional educational standards and quality.

In the short span of 25 years, the college has actively contributed in the process of nation building by nurturing new age academicians, scientists and technical experts, public servants, entrepreneurs and business wealth creators, entertainers and sportspersons in both local and global domains adding to the repute of the institution.

## ABOUT THE CONFERENCE

Businesses are changing in a plethora of ways, via new concepts, innovative strategies, policies, pressure from the public, supply chain influences and many other subtle changes that have given rise to micro business opportunities to function.

The Multi-disciplinary Conference on **“Technology, Innovation and Resilient Entrepreneurship – Catalyst for Sustained Business Excellence”** aims at bringing together academicians, researchers and professionals to share their knowledge and experience regarding recent innovations, sustainable businesses and quality assurance in trade and commerce.

The global business environment is changing at a faster pace. Digitization, technology, innovation, quality offering and entrepreneurship are at the core of business dynamics in the uncertain global business environment. The new paradigm in Global Businesses seeks opportunities from the current crisis by engaging continuously in innovation and investing in disruptive technologies, thus becoming more agile and resilient to the changing market patterns and needs. The ever-evolving technological growth poses new challenges to businesses, and entrepreneurs are constantly on the lookout for innovative ways on increasing their profits while also cutting down operational costs. Organisations are also focussed on gaining insights into the future to improve their operational structure.

Technological developments supported by AI & MI, Innovative ideas by new-age entrepreneurs are altering the global business landscape. Sustaining Innovation Business models, Strategies, Global networking for Value Chain Operations, Communication, Knowledge sharing and Business beyond boundaries are the recent trends in Business Management practices. Entrepreneurial approach and acumen are catalysts for economic growth of any nation.

This conference is aimed to deliberate on exploring recent developments, opportunities and challenges in adapting innovations for sustainable businesses in dynamic environment. It also aims to share the insight of various stakeholders about new management practices employed for Business Excellence and Sustainability. It will provide a platform for sharing knowledge related to various aspects of technology and innovation, e.g. its enablers, consequences, impact and hurdles, work practices, invention, innovative business model and marketing practices, techno entrepreneurship etc.

## MESSAGE FROM THE VICE CHANCELLOR



Elanor Roosevelt has rightly remarked,

“The future belongs to those who believe in the beauty of their dreams.”

And India is the land of millions of such dreams, countless opportunities and a entrepreneurs and business waiting to flourish in every nook and corner of the cities and towns in the country. Over the past few years, we have seen an unprecedented wave of stimulating business ideas which are changing the face of industry, the start-ups have become new engines of growth and out of the box ideas are setting new benchmarks for sustainability and innovation in markets today.

In this pursuit of metamorphosing business practices, Thakur College of Science and Commerce is organising a One-Day International Multidisciplinary Conference on “Technology, Innovation and Resilient Entrepreneurship: Catalyst for Sustained Business Excellence”, organised by Department of Management Studies, M.Com. (E-Commerce) and IQAC of Thakur College of Science and Commerce in association with University of Mumbai and Indian Council of Social Science Research, New Delhi.

As the conference aims to delve into futuristic ideas of business models and acknowledge the changing face of business, I sincerely believe that this platform will bring froth and contemplate on the ideas, views and practices that have ushered in our economy. I look forward to the conference and its outcome.

Thakur College of Science & Commerce has always been promoting such innovative and academically rich endeavours to initiate dialogues amongst the stakeholders from academia and industry to drive the country towards the goal of inclusive and sustainable business practices in the country. I wish Principal Dr. (Mrs.) C T. Chakraborty and her team to deliver a roadmap that seeks to find solutions to the existing problems for an equitable and sustainable society.

On an ending note, as the conference features intriguing research themes, industry interactions and participation of national and international delegates to contemplate on new business practices I believe the outcome to be path-breaking and stimulating. I wish to give my compliments to all the stakeholders of this endeavour.

**Prof. Suhas Pednekar**  
Former Vice Chancellor  
University of Mumbai

## MESSAGE FROM THE MANAGEMENT



“The best way to predict the future is to create it.”  
- Peter Drucker

We are at a time of uncertainty. However, opportunity presents in unexpected ways. It is said fortune favours the brave. I would like to add that what has worked yesterday may not always work for tomorrow. Today is time to be agile, observant and experimentative. Thakur college of Science and Commerce is committed to relentlessly take effort in preparing students to capitalise on any opportunity that come their way. In coming years digitisation, technology will be core of a business and to capitalise on it we need Entrepreneurial mindset. Innovation and creative solution can give us competitive edge, scale and disrupt status quo as we search for answers to our myriad problems.

Congregations like this is an opportunity to update, share, exchange notes and catalyse learnings across the diaspora of academicians, students and practising professionals. Let us create a mood-boarding for ideas to flow. I welcome all of you to deliberate on your areas of research and passion so that collectively we all can expand our boundaries and push the envelope of excellence. Let us create new benchmarks and Thakur College is proud to hold the canvass for creativity to emerge in making resilient solutions for sustainable businesses.

I wish all the best to the members of organising team for making this event a success. I appreciate and welcome all the researchers and delegates who have sent their research work and participated in the conference making it a grand success.

**Shri Jitendra Singh**

Hon. Secretary, Thakur Educational Trust

## MESSAGE FROM THE PRINCIPAL

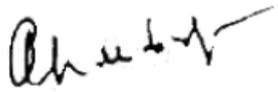


Shaping the future in order to realise economic and social goals is one of the fundamental challenges of human society considering the concepts of robust competitiveness and sustainable entrepreneurship central to its philosophy. Revolutionary Technological advancements transforming the world giving rise to new technology and business innovations are being acknowledged as important for a company's high performance today. Entrepreneurship is widely recognized as being a catalyst for sustainable socioeconomic development and can improve citizens' wellbeing by increasing the wealth and value of nations and their regions.

Thus, the major and immediate challenge of the current century is to generate growth which is inclusive and sustainable. In order to create a better and sustainable future, Governments, Corporates, Educational Institutes and NGOs need to work collectively in playing their respective roles most effectively. In this backdrop, to provide a stimulating platform for academicians, corporates and practitioners to reflect upon, it is gratifying to note that the Department of Management Studies (B.M.S.), M.Com. (E-Commerce) and IQAC, Thakur College of Science and Commerce (Autonomous) in association with University of Mumbai and Indian Council of Social Science Research (ICSSR) has organised a One Day International Multi-Disciplinary Conference on "*Technology, Innovation and Resilient Entrepreneurship: Catalysts for Sustained Business Excellence*" on 28<sup>th</sup> September, 2022.

The objective of this conference is to provide a platform for scholars, intellectuals and professionals from various academic and industrial disciplines to share the research findings from various disciplines and create a space for intellectual discussion, exploration and reflection of key issues that are shaping the world today. The conference aims to highlight the emerging research and practice, where individuals, organizations, industries, regions, and nations are harnessing creativity and invention to achieve and sustain growth.

I wish the International Conference will deliberate on current issues of national and international relevance for sustained business excellence. I am sure that this occasion will provide an affable environment for the researchers and academicians to freely exchange their views and ideas. My best wishes to the organising committee for the success of the conference. Finally, I would like to thank all the research scholars, speakers, faculty members and attendees for their continued support by submitting their contributions and attending the conference.



**Dr. (Mrs.) C.T. Chakraborty**  
**Principal and Chairperson**

## MESSAGE FROM THE CONVENOR

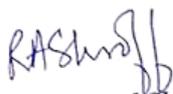
The term 'business' is ever-changing alongside the evolving society. The meaning of the simple word has undergone severe changes and will continue to do so as time advances. From the ancient 'barter system' wherein a trade was only labelled successful when amenities or services of equal values were exchanged; to the era of virtual organisations. Now, the latter prioritises creativity, innovation, technology and most importantly, an entrepreneurial mindset.

However, one common denominator in every method of business over the ages has remained common – persistence. Many creations never get the chance to come into existence only because of a lack of perseverance. An entrepreneurial mind, when paired with creativity and creation leads to fulfilling results. These results, ranging from a product, service, or mere concept, are only fruitful when paired with an equally fierce tenacity. This recipe for success has been passed down the big mogul's generations.

The dynamic factors of business have largely been focused on business-to-business (B2B) and business-to-consumer (B2C) relationships. These modifications can be pinned down to the difference in sales techniques and processes, as well as consumer purchasing behaviours. With the advent of technology, corporations seek out new economic endeavours in the virtual industry, thus resulting in a transition of complete digitisation. This venture can lead to an unprecedented impact with the spike in growth in technological advancements like robotics and Artificial Intelligence (AI). The invention of machine learning, for instance, was an unanticipated development too, which has now become an integral part of our lives. Robotics and AI can open up a plethora of possibilities in the financial future; for instance, air-borne vehicles and man-made clones that perform our tasks for us.

The Multi-disciplinary Conference on *"Technology, Innovation and Resilient Entrepreneurship – Catalyst for Sustained Business Excellence"* is a hopeful attempt to introduce a more comprehensive and expansive outlook of innovations as a new mode in the creation of values. It aims to focus on research that thoroughly studies innovative methods, organisational practices and systems, supply chain design and many more agencies in practice. A premier interdisciplinary platform is provided through the conference for entrepreneurs, researchers, practitioners, as well as educators to present their views and confer on the current set of innovations, trends, and concerns regarding the same. The discussion will also be inclusive of the practical challenges faced by the diverse panel, and the resolutions that are adopted in the field of Technology, Innovation and Entrepreneurship.

Regards,



**Dr. Rupal Shroff**

Convenor, International Conference  
Co-ordinator, Dept of Management Studies,  
Thakur College of Science & Commerce



**Dr. Rakhi Bhattacharya**

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**A STUDY ON IMPACT OF STOCK SPLIT ANNOUNCEMENT ON STOCK PRICES**

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**ABSTRACT**

*In the world of the stock market anything can be possible where the law of demand does not always exist. Stock prices have never been in constant manners with respect to demand due to changing nature of investor's behaviour. Companies take various steps to come back for good returns in the nature of advance announcement, Like Bonus issue, dividend declaration and stock split. This is a strategy to increase the liquidity of shares for increasing the demand of shares. The reactions of investors towards the news or information related to stocks are different. There are some investors who do not have the proper knowledge towards the market, they usually follow the Information from others. Continuously trading leads to fluctuating stock prices. Sometimes investors faced losses due to the announcement of stock split. As per the source of BusinessToday.in, According to Avinash Gupta, (Vice-president) "Investors assume that there could be some benefit resulting from an increase in trading activity and the consequent price movement. They should try to understand the objective of the split and the potential benefits as well as disadvantages." The Security and Exchange Board of India (SEBI) is likely to set a floor price for companies to qualify for stock splits in order to curb market manipulation. This study examines the stock market reaction to stock split due to investors buying behaviour.*

*Keywords: Security and Exchange Board of India (SEBI)*

**INTRODUCTION**

Split of stock is a division of shares into shares with lowest face value. After a split new investors usually like to purchase the stock as it is available at a lowest price. In stock split concept stock increases, price per share decreases. Market capitalization is calculated by multiplying a company's outstanding shares by its current market price. Split increases the number of shares as more investors can buy at the lowest price. Stock split helps to understand the investors that company's growth will continue in the future. Splitting the stock decrease the share price to a more attractive level, where the actual value of share does not change one bit. Another reason to increase the number of stocks is liquidity for large bids. Stock split basically comes in the form of a ratio like 2:1, which indicates existing shareholders will get one extra share on every 2 shares. Companies usually announce stock splits before 1 or 2 months.

**REVIEW OF LITERATURE**

**PJ Jijo Lukose & Narayan Rao (2001)** examined market behaviour around the stock split announcement and past split date. They found the most usual motive for stock splits is to improve liquidity by returning stock prices on trading range. But their sample finding did not support the exact result and more than 40 percent of the cases liquidity was reached to decrease trading volume. The average trading volume per investors was decreased which shown a change in trader profile.<sup>1</sup>

**Anjali Gupta (2012)** studied how stock markets and prices generally react to splits. She found it impossible to generalize market reaction due to stock splits around announcement. According to her find out the behaviour of share prices not only base on stock splits.<sup>2</sup>

**OBJECTIVE OF THE STUDY**

- 1) To Study the investors behaviour during stock split announcement.
- 2) To examine stock market reaction due to stock split announcement.

**RESEARCH METHODOLOGY**

- a. Source of Data Collection:** The data for the study has been collected from primary sources as well as secondary sources. Primary data was collected through questionnaire from the respondents who are engaged investment in stock market. Secondary data was collected from the published sources.
- b. Tools and Techniques used:** The statistical tool of frequency and percentage were used for data analysis.
- c. Sample method:** Convenient and Random sampling method was used for collection of data from retail investors who frequently invest into stock market.
- d. Sample Size:** The data was collected from 50 respondents along with 5 NSE (National Stock Exchange) listed companies.

e. **Scope of the Study:** The scope of the study is focused on collecting primary data related to the concept of impact of Stock split announcement on stock price due to investors' behaviour. Scope of the secondary data collection is various authenticated published data.

#### DATA INTERPRETATION

**Table No. 1** Demographic Profile of the Respondents

Parameters	Category	Frequency	Percentage
Gender	Male	32	64
	Female	18	36
	<b>Total</b>	<b>50</b>	<b>100</b>
Age	18-25	2	4
	26-35	30	60
	36-50	18	36
	51-60	0	0
	60 Above	0	0
	<b>Total</b>	<b>50</b>	<b>100</b>
Occupation	Student	2	4
	Private Job	38	76
	Govt Job	2	4
	Business	8	16
	Home Worker	0	0
	<b>Total</b>	<b>50</b>	<b>100</b>
Annual Income	up to 1 Lakhs	4	8
	1 -2.5 Lakhs	8	16
	2.5 - 5 Lakhs	18	36
	5 -10 Lakhs	16	32
	Above 10 Lakhs	4	8
	<b>Total</b>	<b>50</b>	<b>100</b>

(Sources: Primary Data)

**Data Interpretation & Findings-** Table no. 1 indicates that out of total 50 respondents' approx. 64 percent of respondents were male and 36 percent of respondents were female. 60 percent of the respondents were between the age group of 26-35, 36 percent of the respondents were in 36-50, less than 10 percent of the respondents were in 18-25 and 0 percent of the respondents were between the age group of 51-60 & 60 above. Almost 80 percent of the respondents were employees and more than 15 percent of the respondents were in business. 36 percent of the respondents earned between the ranges of 2.5 - 5 Lakhs, and 32 percent of the respondents were in between 5 - 10 Lakhs. It clearly shows that the maximum people who invest in stock were either employees or business people and the majority belong to an income range between 2.5 – 10 Lakhs.

**Table No. 2** Investors Behaviour towards Investment in stock due to Announcement

Parameters	Category	Frequency	Percentage
Investment in Stock during stock Split	Yes	42	84
	No	8	16
	<b>Total</b>	<b>50</b>	<b>100</b>
Prefer to invest in stock during stock split	Pre Stock Split	30	71.42
	Post Stock Split	14	28.57
	<b>Total</b>	<b>42</b>	<b>100</b>
Reason for investment during stock split	Short Term Returns	13	31
	Less Risky	18	42.85
	Less Price	11	26
	<b>Total</b>	<b>42</b>	<b>100</b>
Gained returns due to stock split	0-10%	5	11.90
	11- 20%	10	23.80
	21-50%	14	33.33
	51-100%	13	30.95

	Above 100%	0	0
	<b>Total</b>	<b>42</b>	<b>100</b>

(Sources: Primary Data)

**Data Interpretation & Findings:** From the above table no. 2, out of the 50 respondents 84 percent of respondents invest in stock immediately after the announcement of stock splits. Out of them almost 72 percent of respondents prefer to invest before stock split and 28 percent prefer to invest after stock split. Around 42 percent investors enter into the market due to maximum price fluctuation and less risk where almost more than 60 percent investors have gained returns more than 50%. It has found that investors frequently invest in stock during the stock split scenario. Research findings also stated maximum investors prefer to invest before stock splits because as per their experience investing in that particular stock is less risky.

**Table No. 3** Announcement Details of stock splits

Script Name	Announcement Date	Date of Split	Ratio of Split
KBC Global Ltd	31.05.2021	12.08.2021	(2:1)
Bajaj Healthcare Ltd	13.08.2021	28.09.2021	(1:2)
Affle (India) Ltd	26.08.2021	07.10.2021	(1:5)
Indian Railway Catering Tourism Corporation Ltd	12.08.2021	28.10.2021	(1:5)
Vardhman Textiles Ltd	22.01.2022	24.03.2022	(1:5)

(Sources: www.moneycontrol.com)

**Table No. 4** Pre and Post Price Performance of the stocks

Script Name	Price						
	21-Mar	21-Apr	21-May	21-Jun	21-Jul	21-Aug	21-Sep
KBC Global Ltd	121.1	121.3	179.2	176.5	196.65	19.6	16.65
	407.83	473.85	434.95	440.5	401.15	351.71	412.6
Bajaj Healthcare Ltd	867.44	838.06	947.81	1069.13	1049.7	1149.25	1127.45
	406.74	465.92	550.28	759.4	845.65	794.35	831.8
Affle (India) Ltd	406.45	461.88	480.79	511.4	435.55	436	286.65
	406.45	461.88	480.79	511.4	435.55	436	286.65
Indian Railway Catering Tourism Corporation Ltd	21-Jun	21-Jul	21-Aug	21-Sep	21-Oct	21-Nov	21-Dec
	406.74	465.92	550.28	759.4	845.65	794.35	831.8
Vardhman Textiles Ltd	21-Nov	21-Dec	22-Jan	22-Feb	22-Mar	22-Apr	22-May
	406.45	461.88	480.79	511.4	435.55	436	286.65

(Sources: www.moneycontrol.com)

**Data Interpretation & Findings:** From the above table no. 3 all five sampled companies' announcement date and date of stock split has been shown along with their ratio of stock splits. In table no. 4 it has been clearly shown after the announcement the prices fluctuated many times and before the announcement the prices stabilized. One of the major government companies IRCTC made a stock split announcement in Aug 2021. In this period from the table, it is identified that in the last month of pre-announcement period prices of shares were stable. We can see price fluctuations and after the announcement in the post period there is no large deviation in prices only some small deviations can be identified.

Whether a company has a good reputation or not, if the demand is high, the price will be increasing. We can say that due to high demand for stock the movement of high price takes place. If we highlight one of the objectives of the company for announcing stock splits is somewhere to increase the demand and prices. Sometimes investors prefer to sell the script after a stock split and it leads to an uncertain fall in the prices of the stock.

Stock prices constantly fluctuate due to change in demand and supply. If more people prefer to buy stock, its market price will increase. If more people try to sell a stock, its price will fall. According to data we can clearly say that the relationship between supply and demand is highly sensitive to the news of the moment. Positive news will lead to the cause of buying more stock and vice versa.

**CONCLUSION**

Announcement of stock split made a significant impact on stock prices. As per the study it is clearly shown there is a positive relationship between investors buying behaviour of stock and price performance of the stock due to announcement. From the investigation, it is clear that the stock split announcement can make a positive impact to the returns of the company. Data also shows a positive return of the investors. Every information in

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the stock market affects the stock prices either positively or negatively. Investors usually make decisions based on announcements. Companies make strategies by announcing the stock split for their own benefits. Companies know the behavioral finance of investors. Either price will be high or less, investors will definitely buy stock.

**RECOMMENDATION**

“Investor Awareness Program” should be conducted on a regular basis which can help investors to make their decision. Because it has been found out of 50 respondents 18 percent investors do not invest during the stock split might be due to less awareness or negative perception about the market.

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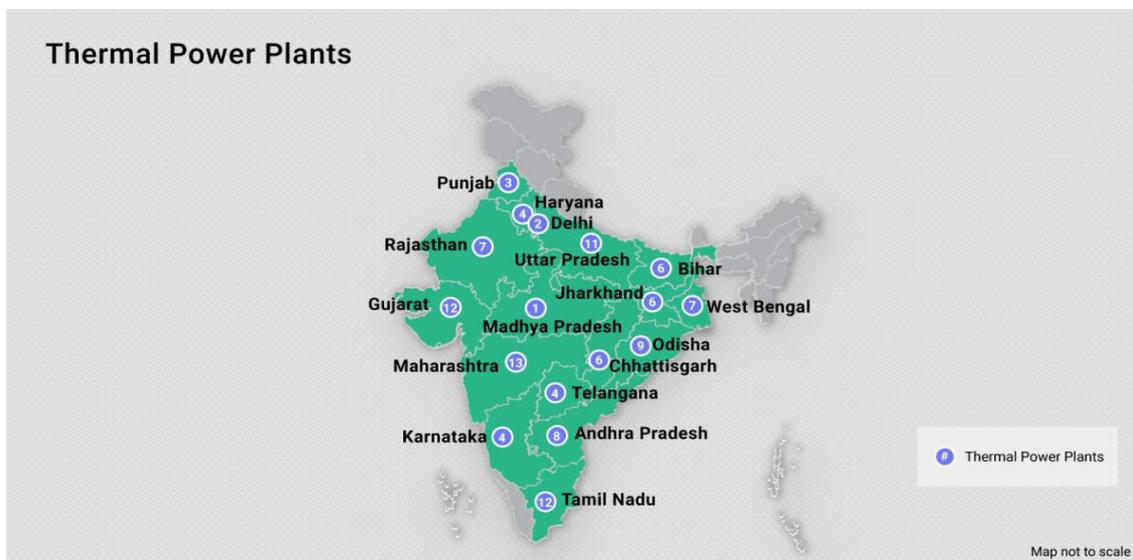
## IMPACT OF BUDGET ON THERMAL POWER SECTOR

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## INTRODUCTION

A government budget is a document created by the government that details the government's expected revenues and estimated government expenditures for the upcoming fiscal year in various sectors. Through this budget, the government implements economic policies and achieves programme objectives. The government budget is utilised to achieve economic stability by preventing corporate volatility in inflation or deflation. The government seeks to manage all stages of business volatility through its fiscal strategy. The fiscal plan emphasises setting aside adequate funds for public sector investment as well as boosting the overall rate of investment and savings. Budgeting establishes a framework for operations, defines performance criteria and benchmarks, increases decision-making clarity by providing comparable performance indicators, and aids in control. With the budget 2022, during the Amrit Kaal, the government hopes to realise its ambition of fostering energy transition and climate action. As the budget remains focused on different sectors of the economy, it also talks about the power sector as a means of economic growth.



Power is a fundamental component of infrastructure, essential for a country's economic growth and welfare. The availability and development of suitable infrastructure is critical for India's economy to continue to thrive. Power generation options include coal, lignite, natural gas, oil, hydro, and nuclear power, as well as viable non-conventional options including wind, solar, and agricultural and domestic waste. Thermal power plants are electricity-generating industrial items. Furthermore, these plants are crucial to customers and are expected to last more than 20 years. It is well established from past experiences that if GDP is to grow at 10% then the power sector needs to grow at the same rate and the thermal power sector can contribute immensely to it. Coal-fired thermal power plants produce the majority of electricity, accounting for about 75% of total power generation. According to figures from the Central Electricity Authority, India's total electricity generation in December 2020 was 103.66 billion units. Union Budget 2022 also declares the government's plan to make changes in the functioning of the thermal power sector to make them more efficient and effective by methods such as use of alternative fuel etc. Thus, the Budget has an immense effect on the working of thermal power stations and they have become more important when the government is increasingly emphasising on becoming carbon-neutral. Different initiatives by the government and the announcements made in the union budget decides the future trajectory of the power ecosystem in the country and thus gains significance. This paper aims to analyse the different announcements made by the government related to the power sector in the union budget 2022-23 and its possible effects on the thermal power sector.

## LITERATURE REVIEW

Enterprises of the energy complex in most cases have a complex hierarchical structure and a wide geographical distribution, in connection with which there is a need to improve the methodology of the effectiveness of their activities by better financial planning (E. V. Dolzhenkova<sup>a</sup>) and L. V. Iurieva)

This research was sponsored by the Ministry of Trade Industry and Energy (MOTIE/KEIT) Korea through the Technology Innovation Program funding state that there are many variables that can affect profitability in the financial model so more time will be required to make the investment cost more accurate( Chul-Seung Hong and Eul-Bum Lee ).

this paper employs a dynamic recursive computable general equilibrium (CGE) model and sets different substitution scenarios, to simulate the impacts of the coal-to-gas policy on gross domestic product (GDP), sectoral output, trade, carbon emission reduction, and air quality improvement (ZhengjieChen<sup>a</sup>YanyanTan<sup>b</sup>JuanXu<sup>c</sup>).

The results prove that some models are far more sensitive to these parameters than others, and renewable generation shares alone are not sufficient to reach desired effects in emission reductions. Finally, a comprehensive scenario for 2030 combines all measures to evaluate general trends that result from the most recent updates in German energy policy Jonasvan Ouwkerk.

The examination of energy audits conducted in a number of facilities in the selected region during this ten-year period reveals several patterns that can guide energy-efficient recommendations on a larger scale SeanKapp<sup>a</sup>Jun-KiChoi<sup>a</sup>KellyKissock<sup>b</sup>.

All rebate programs provided a modest economic boost not only to directly involved equipment manufacturers and marketing service providers, but also to other upstream industries responding to the direct impact and the final demand augmented by the associated increase in value added in the regional economy Jun-KiChoi<sup>a</sup>JiyongEom<sup>b</sup>EmmaMcClory<sup>c</sup>.

Result shows that a \$14M investment in HVAC upgrade to reduce energy and cost in the economy of the Montgomery County, Ohio can result in a total local economic impact of \$22M, stemming from the \$14.5M coming from direct impact, \$2.8M coming from indirect impact, and \$4.7M coming from induced impacts **Jun-Ki Choi**.

The external sources of financing and the acquisition of fixed asset explanatory variables are incorporated, while the predictive variables are net profit margin and return on asset. The study found that long term debt or borrowing is found to have a positive and significant effect on the performance (NPM and ROA) of MTN Nigeria (Samuel Eniola Agbi).

A survey-based instrument was used to collect the data for this study from various local authorities in Klang Valley.This implies, among others, that while participation in the budgeting process can enhance budget performance, the effect is also contingent on the adequacy of resources the participants are presented with. Tuan Zainun Tuan Mat

foreign Reserve exerted a negative insignificant effect on Manufacturing Sector Output, Foreign Reserve had mixed effects on Services Sector Output; such effect tends to be statistically significant only in the short run **Osuji Casmir Chinemerem**.

#### **Announcement in the Budget:**

On February 1, 2022, Union finance minister Nirmala Sitharaman presented the Union Budget for the fiscal year 2022-23 covering a vast range of sectors and governments plan to contribute to their development. The Union Budget also had some announcements related to power sector in the country that will decide the future trajectory of power ecosystem in India and will surely have impact on the functioning and future prospects of thermal power sector as currently India is heavily reliant on the thermal power stations to fulfil its needs although government is trying to diversify its sources of energy by putting increasing emphasis on Renewable Sources of energy. Announcements made in the Union Budget that have impact of thermal power sector are as follows:

- **Vision:** Union Finance minister highlighted the approach of the government by putting forth the government's vision which is based on **Energy Transition & Climate Action**.
- Rs.19,500 crore has been additionally allocated for the Production Linked Incentive (PLI) for the development of high efficiency solar modules in order to reach the target of 280 GW of installed solar power by 2030.
- 5% to 7% biomass pellets are to be co-fired in thermal power plants in order to reduce consumption of coal and productive use of biomass.
- Nirmala Sitharaman also announced the setting up of 4 pilot projects for coal gasification and coal's conversion into chemicals for the industry.

- The Union finance minister proposed establishing an Energy Service Company (ESCO) business model in large commercial buildings that will facilitate capacity building and awareness for energy audits, performance contracts, and a standard measurement and verification process.
- Due to the lack of space in metropolitan areas for establishing large-scale charging stations, a battery swapping policy and interoperability standards will be developed.
- The private sector will be encouraged to build sustainable and creative 'Battery or Energy as a Service' business models. The EV eco-system will be more efficient as a result of this.
- In 2022-23, sovereign Green Bonds will be issued as part of the government's broader market borrowings to fund green projects. The funds will be used to fund public-sector projects that reduce the economy's carbon intensity.
- Data centres and energy storage systems, including grid-scale battery systems will be accorded infrastructure status. The goal is to make it easier to get money for clean energy initiatives.
- She also stated that under the Vibrant Village Program, the government would provide increased financial support for the establishment of Distributed Renewable Energy projects in border villages.
- Reduction in compliances and amendments in union laws were announced to simplify them.

**Impact of Budget Announcements on Power Ecosystem and Thermal Power Stations :**

- The implementation of budget announcements will enhance the stature of the country's thermal power stations in the world as by additional use of biomass in small percentage along with coal will result in CO<sub>2</sub> savings of 38 MMT annually.
- Thermal power stations by using biomass will also ensure an additional income source for farmers, employment opportunities for locals and help in avoiding stubble burning in agriculture fields.
- Pilot projects of coal gasification will help in evolving technical and financial viability of such projects for future.
- The government's increased focus on promotion of electric vehicles to meet its climate action goals will significantly increase the consumption of electricity and subsequently the reliance on thermal power stations.
- The budget also highlights the importance given by the government on finding and developing green sources of energy so as to meet the country's international commitments and minimise the adverse impact of climate change. In light of these developments, the government is trying to reduce the share of energy provided by thermal power stations in the energy mix.
- But as the renewable sources of energy are currently less reliable and prone to disruptions thus the thermal power stations may work as a tool to bridge this gap and ensure energy security of the country.
- The government scheme - SAMARTH (Sustainable Agrarian Mission on use of Agro Residue in Thermal Power Plants - has already taken off in about 40 of the 180 coal-fired power plants in the country.
- The reduction in compliances and amendments to the union laws will promote ease of doing business and will fulfil the government's objective of 'minimum government & maximum governance'.
- The announcements made in the Union Budget that facilitates energy transition will help India achieve Sustainable Development Goals (SDGs), its Intended Nationally Determined Contributions (INDCs) declared at COPs of UNFCCC and take the country on a carbon neutral path.

**Suggestions:** The current bad state of affairs in the thermal power sector is multi-faceted, and short-term difficulties have added to the confusion. The chronic, systemic, and structural concerns mentioned above will not be overcome by just addressing short-term difficulties such as stranded capacity auctioning. As a result, important stakeholders cannot afford to lose sight of the big picture. Listed below are a few interconnected proposals to aid future planning:

- **Sort capacity by the role it serves:** The role of base-load and cycling capacity, as well as the rules that govern them, must be differentiated in a future high RE system. Thermal plants, for their part, must make a realistic appraisal of their current condition of operations and the role they will best serve in the future grid. Under the current system, everyone is motivated to pursue the most profitable choice, resulting in a collective sub-optimality, similar to the Keynesian paradox of thrift.

- **Reduce Coal imports:** If the goal of reducing coal imports is to be achieved, both the amount and quality of coal must be improved. Options such as coal washing, as well as removing bottlenecks to its use, must be pursued in earnest for the latter.
- **Overcome structural impediments:** There is a double burden of strandedness and collective inefficiency if clean and efficient plants (e.g., supercritical) simply cannot perform base-load role due to fundamental constraints. On the buyer's side, DISCOMs should avoid purchasing more power from producers just because they may defer payments to them more readily, which are not always based on marginal costs (let alone cleaner power).
- **Reform through the value chain:** Wholesale energy markets must be supplemented by a rationalisation of fuel supply and logistics to generators, a market design for power purchase that prioritises various objectives, and end-user induction of market responsive behaviour. Signals indicating differential power pricing at different periods (peak vs off-peak) must be sent to large users and urban residential complexes, as an example. Not only would this assist DISCOMs in better managing time-of-day-related concerns than simply shutting down, but it will also signal market preparedness for flexible generator electricity in short-term power markets.
- **Thermal power sector as Energy bridge:** The world is moving towards renewable sources of energy and thus India is too. But a large amount of research and development is required in the renewable energy field and the sources are not much reliable currently and thus over-reliance can pose a risk to energy security of the country. Thus in the transition period, the thermal power sector can act as an energy bridge that will help in ensuring energy security by providing reliable energy in the fields and places where renewable sources fail to do so.

## CONCLUSION

The budget for 2022-23 includes a steady and balanced intervention to support long-term energy growth and sustainability. During the Amrit kaal, the government hopes to realise its ambition of fostering energy transition and climate action. This Budget maintains the momentum towards growth. It creates a parallel track of a modern and inclusive blueprint for the Amrit Kaal. With several mainstream and affiliated sector actions, the budget creates an ideal environment for sectoral growth. The budget undoubtedly provides various push and pull factors in the promotion of newer, cleaner technology. The country's total thermal installed capacity was 234.44 GW in FY22 (till October 2021). Renewable, hydro, and nuclear energy installed capacity were 103.05 GW, 46.51 GW, and 6.78 GW, respectively. Coal-based thermal power generation capacity is estimated to account for roughly 32% of total energy generation capacity in 2030. The estimated trends showcase that although governments focus on renewable energy sources are increasing and the government is moving towards making the power sector carbon-neutral, the reliance on thermal power sector cannot be denied in the near future and thus there is a need for the government to address fundamental problems associated with thermal power sectors. To summarise, a horses for courses approach focusing on multiple-objective alignment should be adopted. This is not something that can be accomplished overnight; rather, it is a step-by-step process that begins with the easiest options and progresses to the more challenging ones. It's also a space where regulators may help by fostering inter-ministerial as well as centre-state coordination and compromise. Fairness is perceived differently by different industries and players, hence the goal should be to obtain collectively superior outcomes.

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**A STUDY ON FLUCTUATIONS IN THE STOCK MARKET DURING COVID-19****Dr. Shivprasad V. Dongre<sup>1</sup> and Dr. Manoj K Mishra<sup>2</sup>**<sup>1</sup>Assistant Professor & Reserch Guide, Shri Basuveswar College, Latur<sup>2</sup>Assistant Professor, Thakur College of Science & Commerce, Mumbai**ABSTRACT**

*This project titled " A Study on Fluctuations with inside the Stock Market During COVID-19" describes diverse nuances of the inventory marketplace in addition to explains the outcomes and results the pandemic had at the long-time period buyers and diverse sectors in general. There is an imperative want to recognize the fluctuations that passed off due to the fact this will assist buyers to get a higher view on a way to hold their portfolio if in destiny such pandemic reoccurs. The cause of the take a look at turned into without a doubt to investigate the fluctuations that had been there with inside the inventory marketplace all through the COVID-19 pandemic. The information turned into received for the take a look at via number one primary information means survey/interview and from secondary information just like the internet, studies papers, etc. Based at the findings, it turned into located that within side the case of the consumer durables industry and the Banking zone, the uncertainty of inventory returns turned into surprisingly extra with a distinction of 0.03 among the pre and submit COVID-19 volatility values in each instances. It turned into additionally located that best with inside the case of the Pharmaceutical zone, the common inventory charge has extended with inside the submit-COVID-19 duration via way of means of 3 %. Majority (71%) of the general respondents desired keeping the shares which they already had all through the pandemic as opposed to promoting them and reserving losses. No zone turned into stored from the wrath of this pandemic and at the side of this few shares noticed primary correction even as the others did now no longer suffer a whole lot due to this pandemic. One of the cause to behaviour this take a look at turned into additionally to make readers of this studies challenge recognize and allow them to examine how horrific a virulent disease can have an effect on their making an investment psyche and pressure them to make errors in such risky inventory markets. This take a look at will assist human beings to prepare themselves if in destiny such pandemic reoccurs and that they locate themselves stuck in this kind of scenario wherein they should manipulate their long-time period investment portfolio.*

**INTRODUCTION**

The fast spread of the unexampled COVID-19 pandemic has positioned the planet in danger and modified the global outlook unexpectedly. Initially, the SARS-COV-2 virus, that induced the COVID 19 herbal occasion brought on in metropolis town, Hubei province of China in 2019 and with time it unfolds anywhere in the arena. This pandemic isn't entirely an global fitness emergency but can be an essential worldwide monetary downswing too. As many nations observed strict quarantine regulations to combat the unseen pandemic, their monetary sports are all of sudden completed off. All mode of transports had been restrained and even restrained amongst nations have not on time global monetary sports. Most significantly; consumers and businesses have avoided their traditional consumption styles due to panic amongst them and created marketplace abnormality. Uncertainty and danger created because of this pandemic, causing essential monetary effect anywhere with inside the global touching every superior and growing economies just like the US, Spain, Italy, Brazil, and India. Some economists have concept of the effect of COVID-19 at the Indian inventory change as a 'Black-Swan Event', i.e., the superiority of an incredibly unanticipated occasion with a particularly bad effect. Studies have conjointly located that the complete preceding pandemic had affected entirely the call for chain. However, this COVID-19 pandemic has affected every the call for chain and deliver chain. Despite the severe results of COVID-19 at the change of the complete economy, there's limited take a look at thereon specifically with inside the case of a growing economy. To shed light in this fact, this paper attempts to analyse the results of COVID-19 on 2 critical exchanges of India, i.e., Bombay Stock Exchange and National Stock Exchange.

**OBJECTIVES OF THE STUDY**

- To examine the fluctuations with inside the inventory marketplace all through the COVID-19 pandemic.
- To locate out how the buyers controlled their long-time period portfolio all through this pandemic duration.
- To examine which zone shares confirmed terrible/fantastic boom all through this pandemic.
- To test whether or not which inventory marketplace disaster turned into the extra devastating one among Stock marketplace disaster 2008 and Stock marketplace disaster 2020.

### SCOPE OF THE STUDY

The scope of the take a look at is to recognize approximately the fluctuations with inside the inventory marketplace which happened all through the pandemic and to have a look at its outcomes on buyers. This take a look at is finished via way of means of a man or woman scholar and this take a look at is completed with inside the area of Mumbai suburban. In this take a look at, I even have completed a survey with the assist of a questionnaire which has helped me for having right suitable data approximately how buyers controlled their long-time period portfolio all through the pandemic and to decide their making an investment psyche. These respondents have helped me plenty for my studies. These respondents have given me right data and feature properly replied the questions requested with inside the questionnaire.

### SIGNIFICIANCE OF THE STUDY

- Stock markets allow companies to be indexed publically and raise the capital. The transfer of capital and ownership is indexed in a miles regulated, steady atmosphere.
- Stock markets sell investment. The elevating of capital lets in companies to develop their businesses, make bigger operational and construct jobs with inside the economy. This investment can be an essential element for monetary trade, boom, and prosperity.
- For buyers, inventory markets provide the most effective manner to take a position coins in order to without difficulty earn a proportion with inside the company's profits (understanding that the hazard of losses exists too). Active buyers/ buyers will definitely buy and promote their stocks way to the plenteous liquidity available in primary securities marketplace.

### SAMPLING METHOD AND SAMPLE SIZE

For the purpose of this research, I have used the "Probability Random sampling" method. The reason for selecting the random sampling method is that my sample size is small, and a fixed set of questions were asked to everyone, hence there is uniformity in data collected. Now, the sampling size for my research is 100 respondents who are either trading or investing in the stock market. These respondents are mainly from Mumbai suburban.

**HYPOTHESIS:** A speculation is a proposed reason behind the hassle to be discussed. The speculation is framed in this kind of manner that the goal of the take a look at is satisfied. Framing of speculation is an essential a part of the studies challenge as on the premise of the speculation studies hassle is designed and carried on.

Two types of hypotheses may be framed i.e. null and opportunity hypotheses. The null speculation states that there might be a terrible effect and the opportunity speculation states that there might be a fantastic effect.

The take a look at of the subject is primarily based totally on the subsequent speculation:

**H0:** There might be a terrible effect of fluctuations with inside the inventory marketplace all through COVID-19.

**H1:** There might be a fantastic effect of fluctuations with inside the inventory marketplace all through COVID-19.

### REVIEW OF LITERATURE

- **Dippi Verma, Praveen Kumar Sinha (January-June, 2020):** Tried to get entry to the effect of COVID-19 instances at the Indian securities marketplace, letting modifications in volatility expectations, similarly as precise duration effect i.e. complete lockdown span of April'20 to May'20. . The results, supported a GARCH (1,1) model and information from sixteen May 2019 to thirteen May 2020, recommended that changes within the total range of cases in India don't have a big impact on the mean of nifty return. However, there's a proof of a positive impact on the conditional variance of the nifty returns. The model is tested for auto-correlation and arch result in residual by using Correlogram check and Arch LM check.
- **P. Hanumantha Rao (2020):** He studied the cascading impact on the world and domestic share markets. He discovered that nifty fifty fell the maximum amount of 15% throughout these troublesome times, however conjointly recovered over 90% return within the following year. A capitalist aims to purchase stocks at low and sell at high and thereby earn returns. However, once a capitalist decides to purchase for a share it will be terribly troublesome to predict if the worth will go up or down. Stock costs were forecasted to perform nicely within the long-standing time if the elemental of the companies is powerful. On the opposite hand, the technical analysis might facilitate to predict the short movement of the stock costs. The study aims to assess

the securities exchange performance of corporations within the power sector in India and examine the performance of the arena that successively can have an effect on share costs.

- Jyothi Chittineni (2020-08-25):** Tried to re-study the hyperlink among India’s Implied Volatility Index and nifty fifty returns for the duration of this COVID-19 pandemic. The take a look at consequences had been important for two motives, one turned into to recognize whether or not or now no longer Indian VIX is satisfying the intention of measuring the near destiny volatility of nifty fifty for the duration of the pandemic, and second, it mentioned the effect of pandemic at the investor’s perceptions concerning the returns and its volatility. The take a look at consequences documented that the nifty profits and IVIX are transferring independently for the duration of the pandemic and there’s no affiliation among the marketplace length and additionally marketplace move. The one-duration lagged nifty returns had a primary impact at the long-run marketplace volatility. The blended effect of terrible and fantastic nifty returns on IVIX wasn’t critical for the duration of the pandemic time. This implied that the Indian buyers weren’t plenty disturbed concerning the fluctuations with inside the marketplace price or length of the marketplace for the duration of the pandemic time.
- Sahil Narang, Rosy Dhall, Bhanwar Singh (October one, 2020):** Examined the have an effect on of pandemic prevalence at the securities marketplace of G-20 nations. They used an event take a look at computation approach to calculate odd returns and panel data regression to make clear the motives for odd returns. Their pattern consisted of indexes in G-20 nations. The located window comprised fifty-8 days after the pandemic prevalence information unleashed with the worldwide information and media. Therefore, approximation window consisted of one hundred fifty days earlier than the event date. They located statistically essential terrible odd returns with inside the four sub-occasion slot for the duration of the fifty-8 days. Negative odd returns are essential for growing and additionally for advanced nations. The collections of this studies disclosed that additive common odd go back from day zero to day forty-three, beginning from (-)0.70% to (-)42.sixty nine percent, as an effect of collected panic with inside the inventory markets resulting from an exaggerated type of pandemic fantastic instances with inside the G-20 nations. Overall, consequences of panel data evaluation showed the restoration of inventory markets from the terrible outcomes of the pandemic that happened.
- M. Praveen Kumar and N.V. Manoj Kumara (2020, October 8):** They centered at the results of pandemic on Indian securities area in addition to the securities overall performance. They analysed marketplace capitalization comparing overall performance of securities and boom of securities marketplace, the usage of the securities marketplace understanding of Pre and Post pandemic reputе via way of means of inspecting data from January 2020 to June 2020. The variables had fantastic in addition to statistically study importance on modifications inside marketplace’s overall performance and additionally the price of its marketplace capitalization. Various sectors like journey and transportation, display commercial enterprise, oil & fueloline are worst affected. The shares of these companies have crashed down extra than forty percent. Many companies have declared financial disaster way to a non-functioning commercial enterprise because of lockdown.

**DATA ANALYSIS**

**I. How did you manage your long-term investment portfolio during this pandemic?**

How did you manage your long-term investment portfolio during this pandemic?

100 responses



- Majority (71%) of the total respondents preferred onto holding the stocks which they already had during pandemic instead of selling it and booking losses.

- Only 29% of the total respondents had sold their shareholdings and trimmed their portfolio to save themselves from booking further losses.

**II. Which stock market crisis was the more devastating one?**

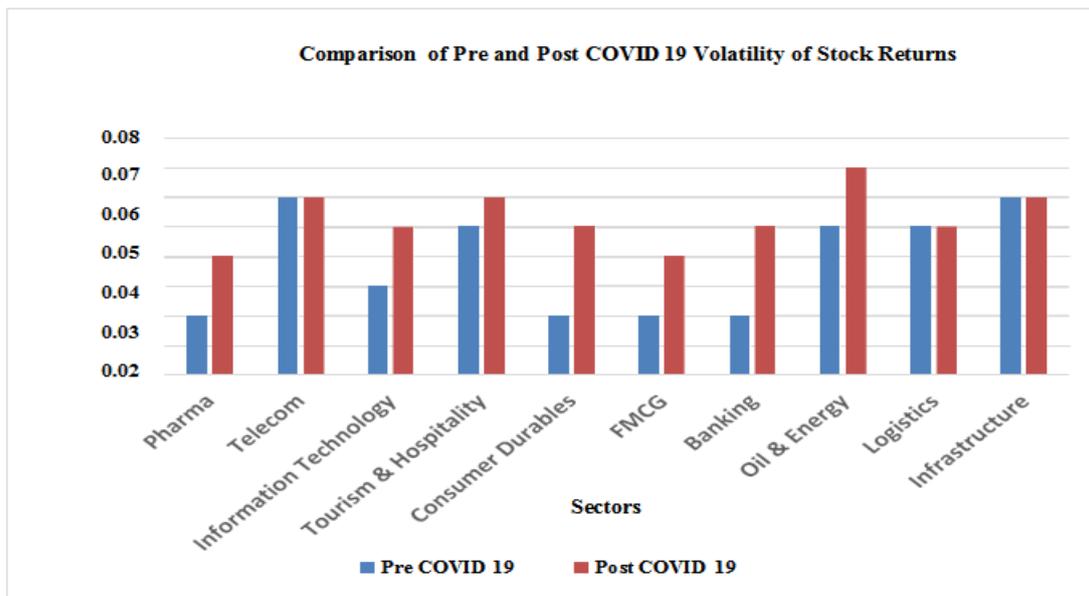
Which stock market crisis was the more devastating one?

100 responses



- According to 72% of the total respondents, Stock market crisis 2020 was the more devastating one as compared to Stock market crisis 2008.
- According to 28% of the total respondents, Stock market crisis 2008 was the more devastating one as compared to Stock market crisis 2020.

**III. Pre-COVID 19 and Post-COVID 19 Volatility (Sector-wise Analysis):**



- The consequences of volatility of inventory returns display that the volatility has elevated to 0.05 with inside the put up COVID-19 duration from 0.02 with inside the pre COVID-19 duration. This suggests that the banking inventory returns have been greater inclined with inside the put up pandemic duration.
- The consequences of Volatility of inventory returns of pharmacy sector display that the volatility of inventory returns in pre COVID-19 duration became 0.02, and with inside the put up COVID-19 duration became 0.04. This suggests that the pharmaceutical shares go back have barely grow to be greater fluctuating with inside the put up COVID-19 duration.

**CONCLUSION**

The current examine become supposed to look at the consequences of COVID-19 on the inventory costs of those groups. It become determined that almost all of the sectors exhibited a significant distinction with inside the inventory costs. Stock fee of numerous groups had been affected by COVID-19.No sector was saved from the wrath of this pandemic and along with this few stocks saw major correction while the others did not suffer much because of this pandemic. This study will help people to prepare themselves if in future such pandemic reoccurs and they find themselves stuck in such a situation where they

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have to manage their long-term investment portfolio. Moreover, in my view, people should try to hold their stocks in such pandemic situations. The reason for this is, you never know when revival stage would occur and quickly you would recover from the losses or decrease that took place in your portfolio in such pandemic times.

**LIMITATIONS OF THE STUDY**

The sample size is limited for the research. The survey was conducted only on 100 respondents. Some of the respondents did not answer all the questions which could hamper the results to a certain extent. The study confines itself mainly to respondents of the “Mumbai” region only. Hence, findings would not be relevant to other cities. Data finding, interpretation and meaning changes if the time horizon or set of population changes.

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**STUDY ON IMPACT OF FINANCIAL PLANNING IN BUILDING OF RETIREMENT CORPUS FOR WORKING WOMEN IN MUMBAI REGION**

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*Investment is the way to utilise savings which are kept idle. The motive of doing investment is to get wealth maximisation or regular return or both. While doing investment one is concern about safety of money with profit. Majority of working women are doing investment after taking information from various sources. The investment process is done by themselves or by someone else. When the investors choose the investment avenues, they take into consideration various factors such as risk, return, time etc. Factors are the features which lead any activity. In case of investment there are many factors which govern the decision of investment. These factors are social, economic, cultural and sometime behavioural. Studying, exploring and understanding the factors, helps to determine the investment behaviour of one. Investment is the way to have financial growth. Factors of investment are different in different gender i.e. men and women. In case of women investor the factors are mainly dominated by social and cultural one. Women investors in large do not take risk while doing investment. And in case of financial planning for retirement there are no efforts take for it.*

*Keywords -*

**1. INTRODUCTION**

Economic growth of a nation is driven by saving and its transformation into investment. This ultimately leads to affect life of people of a country. An investment is done from savings. This is applicable to countries, companies and individuals also. Investment is that part of saved money which is employed in different avenues with an aim to earn future return. The return may be in the form of interest, dividend, profit, or rent derived from investment made in security or property. There are different types of investments such as fixed and recurring deposits, post office saving schemes, Public Provident Fund, bonds, stocks, mutual funds, real estate etc.

Investment is being done, inter alia, by both men and women. Most of the men prefer to invest in fixed deposits, equity shares, mutual funds, and real estate. They invest with the aim to get appreciation in capital, wealth creation, for retirement purpose, and education & marriage of their children. Women save from their earnings and savings by controlling household expenses.

At present except for some of government and public sector employments, employees do not have any retirement benefits such as pension which brings regular income or any other social security measures. Even to get retirement benefits there are many criteria that need to be fulfilled in general like number of years of service, continuation of employment, designation etc. Apart from regular day-to-day expenses there is a major expenditure on health which occurs after retirement on superannuation i.e. medical expenses. To get adequate medical facilities enough money is required and for this retirement planning needs to be done while serving in employment. Retirement preparation, therefore, is an important segment of financial planning for future.

Financial planning is the process of making arrangements from the earnings to meet financial goals over a period of time. This planning is done through prioritisation of needs vis-à-vis the scope of incomes and savings. A correct financial planning helps to fulfil financial requirements on time and in the settled manner.

**2. FINANCIAL PLANNING FOR RETIREMENT CORPUS**

Planning gives direction to any work, and a good and sufficient planning helps to achieve the set target. In order to fulfil financial requirement after retirement, financial planning is absolutely essential. Financial planning for retirement means planning for retirement corpus. Every working man or woman gets retirement after completion of their tenure. The life after retirement also needs money and to get this money there is a need of financial planning when one is already in employment. The accumulation of corpus fund for retirement needs systematic financial planning.

**3. LITERATURE REVIEW**

According to Inaja Anthonia & Chima Martha Rose (2013) - retirement is undividable part of one's employment life. Every individual employed whether in private or public sector even having own business has to retire. The acceptance of retirement and post retirement life is very important for the employee to have smooth post

retirement life. The perception towards retirement, design the attitude towards retirement. When the employer takes steps and measures to do counselling of employees and make them ready for retirement, this helps the employees in doing financial planning for post-retirement life. As the impact of retirement is different on every individual the counselling method is also different from individual to individual. It is the duty of government, other governing bodies, professionals, and employers to make the employees ready for retirement at the correct time through workshop, counselling, seminars awareness programmes, as the retirement has impact on social, emotional and financial needs of employee.

In view of Stareek Simon, Trunk Ales (2013) - The ability of an individual to grasp financial concepts, risks, and products is improved by financial education, which leads to a better level of financial literacy. The investors are strengthened and made risk-ready by the instructions and goals that are based on the current information. People who are more financially literate know better where to look for assistance and how to build their wealth. The average investor has a lower level of financial knowledge than is necessary. There are economic and social factors which affect the investment decision of an individual. Financial education strengthens the required skill for investment decision especially for women in retirement plan. The financial literacy programmes must be tailor made and according to the target population. The financial literacy programme must be qualitative rather than quantitative. The financial literacy or education programmes must be upgraded regularly as per changing environment.

According to Society of Actuaries (2013) - the retirement risk is more among women compared to men as the life expectancy is more of women compared to men in general. The middle income group does not have enough savings for investment purpose especially for retirement purpose. And in case of women worker they have lower savings and very negligible amount for investing in retirement plan. Women do have savings but the priorities are not doing investment for their retirement but for fulfilling family responsibilities. In many instance women are living more longer life then men but they never plan their own retirement and the period of widowhood becomes very difficult as at the old age the medical expenses increase with time. The loss of a spouse causes a drop in standard of living for many women. Older women are far more likely to be poor and much more likely to be alone. Women are less likely to have retiree medical benefits based on employment, which can affect their medical costs. The effects of inflation are greater for those who live longer and for women as well. Depending on the length of employment, the effects of inflation on free medical benefits, pension benefits, and social security benefits rise over time.

In view of Hemalatha, Pavithra (2013) - the women have started thinking and understanding that money should be saved and investment be made to face the critical situations of the life. They need to develop the skill of planning for the financial needs. Women are generally found to keep cash idle rather than investing it, they keep the cash idle as they would like to meet their personal expenses like jewellery, beauty parlour, shopping and many such petty expenses by this idle cash. The respondents especially were salaried women e earning a fixed salary. The investment objectives of these salaried working women is safety, tax saving, retirement plans, security, regular inflow of income.

In view of Gargi Pant (2013) - it has been analysed that married women are more aware about the retirement planning and have done more for retirement as compared to unmarried women. It is also analysed that the females' are moderate risk bearer and would like to invest in less risky avenues.

#### **4. OBJECTIVES OF THE STUDY**

**4.1**To identify the factors influencing in choice of Investment preference by working women in Mumbai Region.:

**4.2**To analyse the Investment pattern and Investment avenues preferred by working women in Mumbai Region:

**4.3**To identify the impact of financial planning by working women in Mumbai Region on retirement corpus

#### **5 HYPOTHESIS OF THE STUDY**

In the light of the above-cited objectives, the researcher for the present study has set the following hypotheses.

**H0-** There is no significant difference between long term financial planning and short term financial planning for the investment made by working women in Mumbai Region.

**H1-** There is significant difference between long term financial planning and short term financial planning for the investment made by working women in Mumbai Region.

**H0:** There is no association between investment of savings and investment made for retirement corpus.

**H1:** There is an association between investment of savings and investment made for retirement corpus.

**H0:** There is no association between investment for retirement planning and investment made for retirement corpus.

**H1:** There is an association between investment for retirement planning and investment made for retirement corpus.

**6. DATA ANALYSIS**

The primary data was collected from 1500 respondent from Mumbai region. All were the working women.

**Table No. 1 - Need of Financial Planning in fast city life of Mumbai**

<b>Financial planning is of utmost important in fast city life like Mumbai</b>	<b>Total</b>
<b>Yes</b>	<b>196</b>
<b>No</b>	<b>4</b>
<b>Total</b>	<b>200</b>

*Source:* Compiled from Primary data.

Financial planning is important for city like Mumbai according to 196 respondents i.e. 98 percentages of total respondents. And 4 respondents do not give importance of financial planning. Financial planning gives estimate regarding the future need of savings of money.

**Table No. 2 - Planning of Investment by working women respondents**

<b>Plan before Investment</b>	<b>Marital Status</b>		<b>Total</b>
	<b>Single</b>	<b>Married</b>	
<b>Yes</b>	36	108	144
<b>No</b>	8	32	40
<b>Not Applicable</b>	8	8	16
<b>Total</b>	52	148	200

*Source:* Compiled from Primary data.

There are 184 respondents who do investment i.e. 92 percentages of total respondents. There are 144 respondents who do planning regarding investment i.e. 78 percentages and 40 respondents do not plan before doing investment i.e. 22 percentages of these respondents. The respondents who do planning of investment, among them 108 respondents are married i.e. 75 percentages and 36 respondents are single i.e. 25 percentage of respondents. Married women do planning before doing investment from their savings as they are planning for future expenses which are known and also for unknown expenses.

**Table No 3 - Factors influencing in choice of Investment Options of working women respondents**

<b>Factors</b>	<b>Marital Status</b>	<b>Least Important</b>	<b>Less Important</b>	<b>Neutral</b>	<b>More Important</b>	<b>Most Important</b>	<b>Weightage Product</b>	<b>Weightage Average</b>
<b>Reputation of the Company</b>	Single	0	0	12	16	24	<b>1650</b>	<b>4.23</b>
	Married	0	16	24	32	76	<b>4590</b>	<b>4.14</b>
<b>Peer Pressure</b>	Single	8	0	28	16	0	<b>1170</b>	<b>3.00</b>
	Married	24	36	48	40	0	<b>3000</b>	<b>2.70</b>
<b>Family Pressure/Dependent Family Members</b>	Single	8	4	16	16	8	<b>1260</b>	<b>3.23</b>
	Married	12	20	56	48	12	<b>3540</b>	<b>3.19</b>
<b>Future need/Old Age/Retirement</b>	Single	4	4	16	12	16	<b>1410</b>	<b>3.62</b>
	Married	12	4	32	56	44	<b>4200</b>	<b>3.78</b>
<b>Information about high and assured returns in long run</b>	Single	0	0	16	16	20	<b>1590</b>	<b>4.08</b>
	Married	0	20	24	40	64	<b>4440</b>	<b>4.00</b>
<b>Strong Financial analysis as per need</b>	Single	0	0	24	8	20	<b>1530</b>	<b>3.92</b>
	Married	4	8	32	44	60	<b>4440</b>	<b>4.00</b>
<b>Tax Savings</b>	Single	0	0	12	20	20	<b>1620</b>	<b>4.15</b>
	Married	0	4	12	76	56	<b>4710</b>	<b>4.24</b>
<b>Favourable Market</b>	Single	0	0	16	20	16	<b>1560</b>	<b>4.00</b>

<b>Condition for investment</b>	Married	0	12	32	60	44	<b>4350</b>	<b>3.92</b>
<b>Less risky option of investment</b>	Single	0	4	12	28	8	<b>1470</b>	<b>3.77</b>
	Married	0	12	36	44	56	<b>4410</b>	<b>3.97</b>
<b>Job Security</b>	Single	0	0	8	28	16	<b>1620</b>	<b>4.15</b>
	Married	0	12	40	60	36	<b>4230</b>	<b>3.81</b>
<b>Habit of savings and investment</b>	Single	0	0	12	32	8	<b>1530</b>	<b>3.92</b>
	Married	0	8	28	68	44	<b>4440</b>	<b>4.00</b>
<b>Fear of uncertainty</b>	Single	0	8	8	24	12	<b>1470</b>	<b>3.77</b>
	Married	0	4	60	64	20	<b>4080</b>	<b>3.68</b>
<b>Total</b>	<b>Single</b>						<b>3.82</b>	
	<b>Married</b>						<b>3.79</b>	

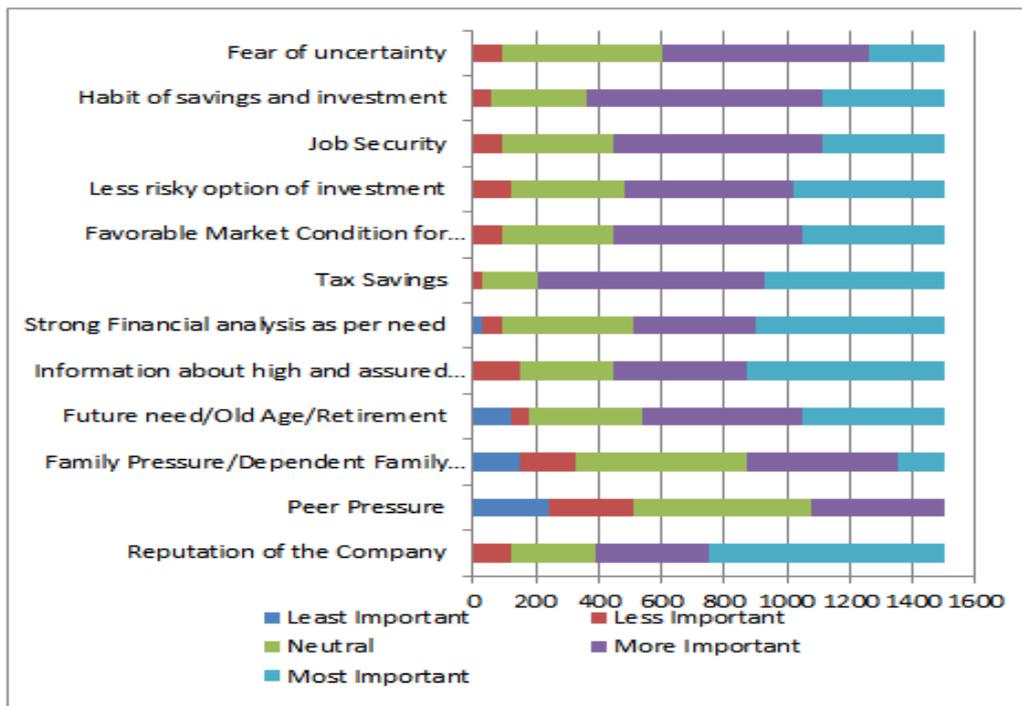


Figure 1- Factors influencing in choice of Investment Options of working women respondents

6.1 Hypothesis Testing

**H0: THERE IS NO SIGNIFICANT DIFFERENCE BETWEEN LONG TERM FINANCIAL PLANNING AND SHORT TERM FINANCIAL PLANNING FOR THE INVESTMENT MADE BY WORKING WOMEN IN MUMBAI REGION.**

**H1: THERE IS A SIGNIFICANT DIFFERENCE BETWEEN LONG TERM FINANCIAL PLANNING AND SHORT TERM FINANCIAL PLANNING FOR THE INVESTMENT MADE BY WORKING WOMEN IN MUMBAI REGION.**

As the data collected were categorical and measured as nominal scale, average method was applied to test the hypothesis for the study. Table no. 5.11 describes the test results of averages for the testing of Hypothesis and results of the same

Table No 4 - Testing Hypothesis

Long Term		
Investment Options	N	Average
Gold/Gold Scheme	80	75
Mutual Funds – SIP	124	
Insurance - Term Plan	124	
Insurance – Others	44	
Real Estate	56	
Stock Market	56	

Investment Funds - For Children	52	
Investment Funds - For Retirement	64	
<b>Short Term</b>		
Investment Options	N	Average
Recurring Deposits	104	<b>96</b>
Fixed Deposits	156	
Mutual Funds - Tax Savings	104	
Mutual Funds- General	52	
Insurance – Mediclaim	136	
Investment Funds – Other	24	

As per above table there is significant difference in average number of respondents planning for investment out of savings for long term i.e. 75 and short term i.e. 96. Thus null hypothesis stand to be rejected. Thus, there is a significant difference between Short term investment and long term investment made by the working women in Mumbai. It has been concluded through Inferential Analysis that, working women are planning more for short term as compared to long term investment.

**H0: THERE IS NO ASSOCIATION BETWEEN INVESTMENT OF SAVINGS AND INVESTMENT MADE FOR RETIREMENT CORPUS.**

**H1: THERE IS AN ASSOCIATION BETWEEN INVESTMENT OF SAVINGS AND INVESTMENT MADE FOR RETIREMENT CORPUS.**

As the data collected were categorical and measured as nominal scale, Non parametric test (Chi Square test) was applied to test the hypothesis for the study. Table describes the test results of Chi Square Test for the testing of Hypothesis and results of the same.

**Table no. 7 - Test Statistics**

	Any avenues of investment which is building up any retirement corpus	Investment of Savings
Chi-Square	433.200 <sup>a</sup>	1058.400 <sup>b</sup>
Df	2	1
Asymp. Sig.	.000	.000
a. 0 cells (0.0%) have expected frequencies less than 5. The minimum expected cell frequency is 500.0.		
b. 0 cells (0.0%) have expected frequencies less than 5. The minimum expected cell frequency is 750.0.		

As per above table, As sig. value is less than 0.05 (at 95percent level of significance) i.e. 0.000, thus, there is an association between any avenues of investment which is building up any retirement corpus and Investment for savings. It has been concluded through Inferential Analysis that avenues of investment which is building up any retirement corpus is dependent on Investment for savings.

**H0: THERE IS NO ASSOCIATION BETWEEN INVESTMENT FOR RETIREMENT PLANNING AND INVESTMENT MADE FOR RETIREMENT CORPUS.**

**H1: THERE IS AN ASSOCIATION BETWEEN INVESTMENT FOR RETIREMENT PLANNING AND INVESTMENT MADE FOR RETIREMENT CORPUS.**

As the data collected were categorical and measured as nominal scale, Non parametric test (Chi Square test) was applied to test the hypothesis for the study. Table describes the test results of Chi Square Test for the testing of Hypothesis and results of the same.

**Table No. 8 - Test Statistics**

	Any avenues of investment which is building up any retirement corpus	Retirement Planning
Chi-Square	433.200 <sup>a</sup>	38.400 <sup>b</sup>
Df	2	1
Asymp. Sig.	.000	.000
a. 0 cells (0.0%) have expected frequencies less than 5. The minimum expected cell frequency is 500.0.		
b. 0 cells (0.0%) have expected frequencies less than 5. The minimum expected cell frequency is 750.0.		

As per above table, As sig. value is less than 0.05 (at 95percent level of significance) i.e. 0.000, thus, there is an association between any avenues of investment which is building up any retirement corpus and retirement

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planning. It has been concluded through Inferential Analysis that avenues of investment which is building up any retirement corpus is dependent on retirement planning.

### **7. RECOMMENDATION**

- a. In general women are having long life than men. In such condition, working women must understand that the retirement planning and retirement investment make them independent rather than depending upon others. And this message can be spread by the employer, government agencies, investor education societies and peer.
- b. There is no pension benefit to the employees of private companies and in case of Government Company also its limited. In such condition there is a high need of self-enrolment in pension plans. There are many insurance companies who are providing pension plans. The working women need to enrol themselves in such pension plans.
- c. The importance of pension plans need to convey to the working women by financial advisors, spouse, family members, peers and friends. The pension plans should not be only termed as tax saving tool but also as support for future post-retirement life need of money.
- d. Advertisements are the most effective manner to create impact in the minds of investors regarding importance of investment. There is a need to show women as decision maker or participant in making decision of taking retirement planning and doing investment in retirement funds.
- e. Advertisements must portrait the post retirement life of the individual as smooth as is having during his/her working life. The importance of healthy, good and comfortable post retirement life must be emphasised in advertisement so that women take much interest in taking investment funds for remittent and participate in creating retirement corpus.
- f. Participation of Media will play important role in spreading awareness about the retirement corpus and retirement planning. Media including print and television commercials. Commercials showing the women as financial decision maker can improve the participation of women in making financial decision and taking investment decision
- g. The retirement planning and creation of retirement fund should be started at soon as possible by the working women. The decision of taking investment funds related to retirement should not postpone till the age of retirement. When the working woman starts early investment for retirement, she will have sufficient fund for post- retirement life.
- h. Women do investment but more in conservative way. They invest in secured investment option such as post office, bank fixed deposits etc. While investing there is no long term saving for retirement purpose. Awareness is required for creating retirement corpus with new investment products.
- i. Financial literacy is an important tool for making good retirement income. Many women know about the importance of savings and investment. The information regarding diversion of investment towards retirement is an essential step.
- j. Financial market is changing rapidly and with this change of financial market the responsibility of individual has increased. This change in financial market especially in area of retirement fund has taken many folds. The women need to get correct information of this changing financial market.
- k. There is no specific retirement plan or investment product specifically for working women at domestic level. Giving specific tax benefit or return benefit to women through investment for retirement planning can boost their participation in investment.
- l. Women working in different sectors have different reasons and opinion regarding retirement planning. There is need to conduct study to understand the reason for not investing for retirement purpose by working women in every sector individually. With these studis specific action can be taken to eliminate the hurdles in making retirement planning by working women.
- m. The significance of retirement planning needs to be highlighted through awareness initiatives. In the process of retirement planning, retirement corpus role also must be clear to working women, family, peers and society at large. The demonstration of benefits of retirement planning done on time should be effectively communicated to the working women.

- n. The role of women in the retirement planning is absent in Indian scenario at household level and at workplace level. Women as a decision maker for financial activities is total absent in domestic society. Highlight of role of women in making retirement planning, investments decision and financial decision will change the behaviour of future generation towards retirement planning.
- o. The importance of retirement planning should be portrayed as the need to afford the good lifestyle after retirement and at the same time importance of retirement planning at early age can help in making enough savings must be explained to working women.
- p. Many working women contribute towards the retirement planning but the savings are not enough for the same as they have started the retirement planning very late and they do not have sufficient retirement corpus for the same. There is a need to make them to create retirement corpus and start planning for retirement at early as possible.
- q. Participation of local government should be there in promoting investment and retirement planning among working women especially for poor and lower income working women by explaining them the importance of retirement fund to overcome financial challenges in older age.
- r. The presence of pension funds must be reached to the working women. There are many pension funds which are started by government, private companies. Awareness must be created for same among working women and they must be promoted for auto enrolment for such pension plans.
- s. The financial independence of working women after retirement is important and should be highlighted to the working women. The financial independency is possible if retirement funds are created through retirement planning. This message must reach clearly to women and must be motivated for creating retirement corpus for retirement planning.
- t. The access of information regarding investment, retirement planning should be easy and on time for the women who need the information. The source of such information must be clearly explained to the working women.
- u. There should be financial counselling form the side of employer to the women working in the company. This counselling may be done inperson, telephonic, video chat and if women are hesitating they can take help of written way also.
- v. There is a need to conduct study of all sectors to find out the specific reason or to know why working women do not plan for retirement, what can inspire them to plan for retirement and what are the main retirement concern. The result of such study can provide direction for creating awareness in effective manners.

## 8. CONCLUSION

Factors are the governing elements which affect any act of decision. There are many factors which are generally deciding the investment by women. There are many factors which are common between married and single women while taking decision of investment. Such as return on investment, fear of uncertainty, peer -pressure whereas factors such as future retirement need of money, dependent responsibilities, and tax savings are having different intensity on investment decision. Women tend to be more conservative investor; they tend to rely on others for taking investment decision like on spouse, father, brother and professionals. Even working women depends on others for taking financial decision for themselves.

The financial literacy is low among the women as compared to men in general. Women do savings whether working or non- working, married or unmarried. The savings and investment decision, choice change with financial literacy i.e. financial information about investment. The financial literacy which paly the major role in financial planning and investment is lower among women compared to the required.

The next most important factor is peer pressure in process of financial decision making by working women. With the change in medium of communication and digitalisation the peer pressure has increased. With increasing use of social media the influence of peer is increasing on financial decision making of working women.

Understanding the factors can help the investment companies to make understand women to do investment. There are some common factors which are commonly believed in case of women investors.

Investment pattern indicated the selection of investment avenues i.e. various investment products. The selection of investment avenues is influenced by many factors. The investment pattern of an individual shows its choice

of investment avenues, expectations from investment, risk bearing capacity etc. Investment pattern may change after some times as the investor become more financial literate over a period of time.

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## A STUDY ON THE EFFECTS OF ADVANCEMENT IN UPI AND E-PAYMENT TECHNOLOGY ON STUDENTS OF THAKUR COLLEGE OF SCIENCE & COMMERCE

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### INTRODUCTION

#### ❖ Overview of Online Payments:

The world is becoming more digitalized in every industry these days, and one of the best examples is how numerous countries throughout the world are transitioning to a cashless society. A cashless society is one that does not use cash in any of its transactions and instead conducts all of them digitally. Several countries throughout the world do more than half of their transactions using cashless means.

Unified Payment Interface (UPI), a new age payment system introduced in India by National Payment Corporation of India. Unified Payment Interface is a mobile centric, real time interbank payment system which has the potential to transform and universalize digital payments in India.

The government of India is also supporting the use of digital payment apps such as Aadhaar Payment App, UPI App, Bharat Interface for Money (BHIM) App, and private sector apps such as Paytm, Mobikwik, and Freecharge. Such innovative apps are useful for transferring payments throughout our country. The digital payments business in India is rapidly expanding, creating a highly appealing platform for international investors to invest in India.

UPI is a simple payment tool created by NPCI that is based on IMPS system. UPI can operate on a smart phone and it works as an email ID for money. It facilitates virtual Payment address (VPA: A VPA is an ID, which a user creates by linking their accounts to a bank's mobile application) as a payment identifier for sending and collecting money and works on single click.



Above 50% of the youth population use UPI mainly for recharges, booking tickets etc., Most of the Youth have revealed that they use UPI because of its ease and quick nature of transaction, as well as time saving. Effects of Demonetization and increase in smart phone with high speed internet has led the towards UPI.

### II] REVIEW OF LITERATURE

- ❖ Mr. Rahul Gochhwal wrote a study on **Unified Payment Interface—An Advancement in Payment Systems**. He concluded that UPI has enabled mobile phones to be used as a primary payment device for making and accepting payments. UPI leverages high teledensity in India to enable every bank account holder to make digital transactions using a mobile phone.
- ❖ Dr. Virshree Tungra wrote a study on **Customer Insight Towards UPI** in the year 2019 and the conclusion were: UPI developed the m-payment technology by facilitating mobile phone to be used as a main payment device for giving and accepting payments.
- ❖ Mr. Dinesh M. Kolte and Dr. Veena R. Humbe wrote a study on **Study of UPI/BHIM Payment System in India** in the year 2020 and the conclusions were: As per the above study it showed that students are extensively using the 3rd party UPI/BHIM on mobile phones. For students it is a convenient payment system and can be a very useful tool with students for online transactions. This will help students for digital payments without need of any complex mechanism

- ❖ Mr. Jayaram Narayanan wrote a study on **Growth on UPI apps in India after Covid outbreak** in the year 2021 and the conclusions were: The growth of UPI apps in India post 2020, its contribution to digitalisation, development of many fintech companies and start-ups and the payment system recording two billion transactions in a month are phenomenal for the digital payment space.

## II] RESEARCH METHODOLOGY

### A. RESEARCH PROBLEM

This research is based on understanding the effects of increasing technology in the field of UPI and E-Payments on students and their consumption and spending patterns. The general idea of this paper is to study the effects of growth of UPI & E-Payments.

### B. OBJECTIVES OF THE STUDY

- ❖ To analyze the preference between online payment facilities or traditional payment methods.
- ❖ To analyze the effect of advancement in online payment Systems on consumption patterns among students.
- ❖ To study the impact of online payment applications on consumers.
- ❖ To study whether increasing online payments have had a positive impact on the economy.

### C. HYPOTHESIS OF THE STUDY

**H<sub>0</sub>:** The advancement of technology in UPI & E-Payment Facilities does not have any effects on students of Thakur College of Science & Commerce.

**H<sub>1</sub>:** The advancement of technology in UPI & E-Payment Facilities has effects on students of Thakur College of Science & Commerce.

### D. SCOPE OF STUDY

This research was conducted by us on the students of BAF Department of Thakur College of Science and Commerce. The time frame for this research was 20 days. This research is a Descriptive study as it studies both the qualitative and quantitative aspects of online payment applications and its effects.

### E. SAMPLING

- ❖ **Sample Size:** The sample size in this research is 100 respondents from the BAF department of Thakur College of Science & Commerce.
- ❖ **Data Collection:** Primary Source of Data was collected by circulating Google Forms Link. Secondary source of data collection was useful to understand the research topic more accurately.
- ❖ **Sample:**

	FY	SY	TY	TOTAL
MALE	8	13	37	58
FEMALE	14	5	23	42
TOTAL	22	18	60	100

### F. LIMITATIONS OF THE STUDY

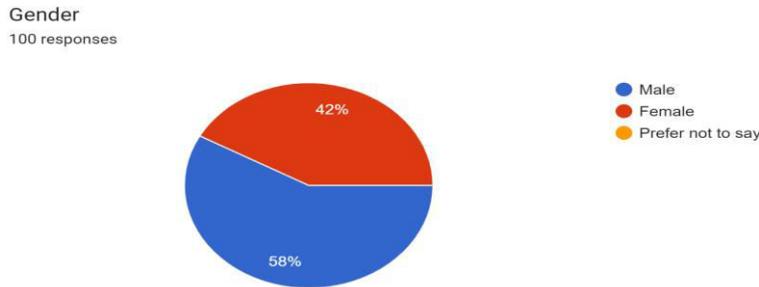
- ❖ **Time Constraints:** The time frame for this research was limited to a short period of time: 20 days.
- ❖ **Geographical Constraints:** The research was conducted only in the BAF Department of Thakur College of Science & Commerce and may not reflect the population accurately
- ❖ **Monetary Constraints:** This research was done without any funding

## IV] ANALYSIS & INTERPRETATION

The collected data was analyzed by using pie-charts. The interpretation of the collected data is given below. Data analysis helps us to determine whether our hypothesis is accepted or rejected. We will conclude on the basis of the collected data.

TOTAL RESPONDENTS: 100

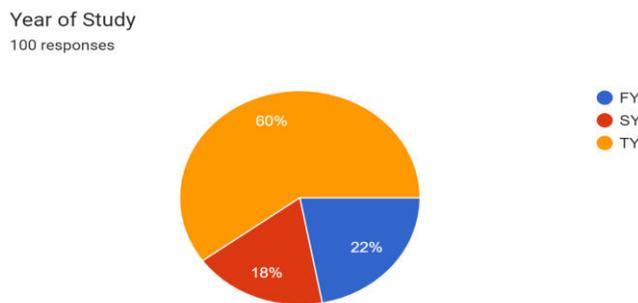
Q1]



Interpretation:

- ❖ Out of the respondents, 58% (58 people) were male.
- ❖ 42% of the respondents (42 people) were female.
- ❖ This shows that male respondents are more than female respondents in the study.

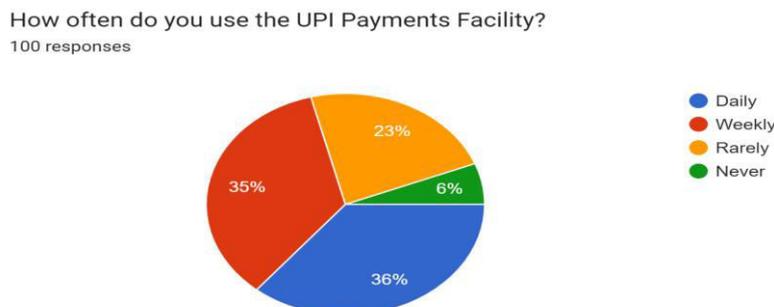
Q2] Year of Study



Interpretation:

- ❖ Out of the 100 respondents, majority of the data is collected i.e. 60% (60 Respondents) from Third Year Degree College Students being approximately of the age 19-20y.
- ❖ 22% of the respondents (22 People) are from First Year Degree College being approximately of the age 17-18y
- ❖ 18% of the respondents (18 People) are from Second Year Degree College being approximately of the age 18-19y
- ❖ This shows that majority of the respondents are Adults (>18y of age) and are assumed to have Bank Accounts through which they make payments.

Q3]



Interpretation:

- ❖ Majority of the respondents (36%) use UPI Payments Facility on a daily basis.
- ❖ Similar to the previous count, 35% of the respondents use UPI Payments Facility on a weekly basis.
- ❖ 23% of the respondents Rarely use UPI Payments Facility.
- ❖ 6% of the respondents Never use UPI Payments Facility.
- ❖ This shows that almost 71% of the respondents would prefer to use UPI on a frequent basis. It can be concluded that using this facility is popular amongst the youth.

Has the advancement of technology in Payments System affected your spending patterns?  
100 responses

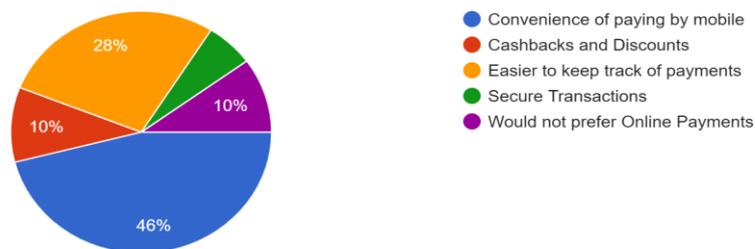


**Interpretation:**

- ❖ 55% of the respondents (55 People) feel that the advancement of technology in Payments System has affected their spending or consumption patterns in a positive manner.
- ❖ 29% of the respondents (29 People) feel that the advancement of technology in Payments System has affected their spending or consumption patterns in a negative manner.
- ❖ 16% of the respondents (16 People) feel that the advancement of technology in Payments System has not affected their spending or consumption patterns.
- ❖ This shows that the advancement has had an increase in spending patterns of the consumers which has overall affected majority of them in a positive manner.
- ❖ While a few of them still feel that due to UPI their spending has increased which in turn has increased their budget with unnecessary shopping of items.

**Q5]**

For which of these reasons would you prefer paying via UPI & other Online Facilities  
100 responses



**Interpretation:**

- ❖ 46% of the respondents would prefer paying via UPI and other online facilities. One of their major motivation to do so is the Convenience that UPI offers from paying via a mobile.
- ❖ 29% of the respondents prefer to use UPI and other online facilities due to the Ease of keeping track of payments. UPI & Online Payments have all the transactions stored in an organised manner with the information of both parties readily available at all times.
- ❖ 10% of the respondents prefer to use UPI and other online facilities due to Cashbacks & Discounts offered by the various UPI apps and Online Payment platforms. Cashbacks have become a common marketing technique to increase customers on the respective app.

- ❖ 10% of the respondents prefer not to use Online Payments at all. 10 people would prefer to use the traditional method of exchange of money.
- ❖ Lastly, 5% of the people are motivated to use UPI and Online Payments as they find it Secure.
- ❖ This shows that majority of the respondents are motivated to use UPI transaction services as it is convenient than the traditional methods, these days it is completely normal to go out without carrying physical cash.

**Q6]**

What Payment system do you prefer while making Online Payments  
100 responses

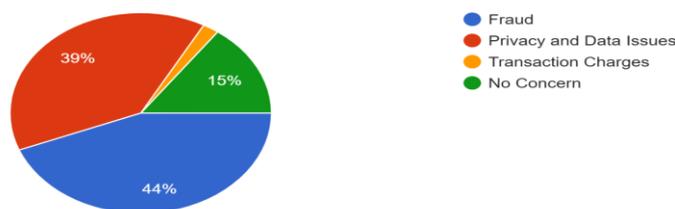


**Interpretation:**

- ❖ 72% of the respondents (72 people) prefer to use UPI Facility as their mode of online payments.
- ❖ 20% of the respondents (20 people) would prefer to pay online via Credit and Debit Cards and would still consider entering their Card Details to make a payment rather than usage of UPI.
- ❖ 8% of the respondents would pay via Net Banking and Mobile Banking.
- ❖ This shows that the popular way of sending money in the earlier days, Net Banking, is not that common among the age group of 17-20y. The youth is slowly evolving to the usage of faster and convenient way of sending money.

**Q7]**

What is your biggest concern while using Online Payments  
100 responses



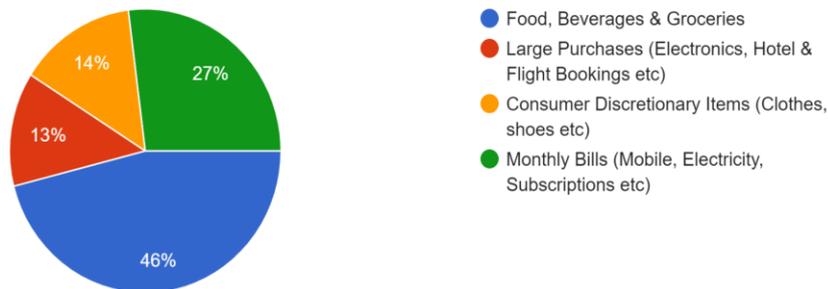
**Interpretation:**

- ❖ 44% of the respondents (44 people) are concerned about Frauds while making online payments.
- ❖ 39% of the respondents (39 people) are concerned about Privacy and Data Issues while making online payments.
- ❖ 15% of the respondents (15 people) are not at all concerned while making online payments.
- ❖ 2% of the respondents (2 people) are bothered by transaction charges while using online payments.
- ❖ This shows that majority of the respondents would use UPI Payment Facilities despite having Fraud and Privacy Concerns.
- ❖ The rising of fraud cases might be one of the reasons that demotivates people to use Online Payments

Q8]

For which of the following purchases do you use online payment facilities the most

100 responses

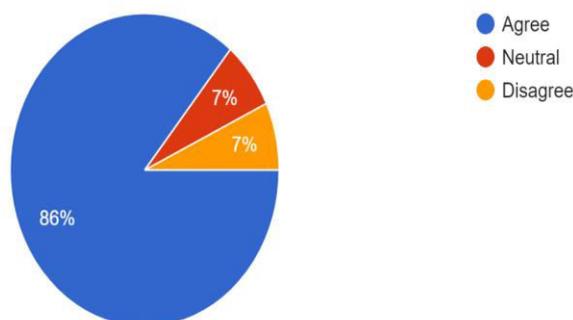


**Interpretation:**

- ❖ 44% of the respondents (44 people) use UPI and Online Payment Services to buy Food, Beverages and Groceries, majorly consisting daily necessity items.
- ❖ 27% of the respondents (27 people) use UPI and Online Payment Services to pay or renew Monthly Bill Obligations.
- ❖ 14% of the respondents (14 people) use UPI and Online Payment Services to buy Consumer Discretionary items like shopping on E commerce website and apps like Amazon, Flipkart, Myntra etc.
- ❖ 13% of the respondents (13 people) use UPI and Online Payment Services to make large purchases including buying electronics, hotel bookings etc
- ❖ Regardless of similar services offered by the bank, people would prefer to keep a monthly deduction from their UPI id as it charges no or minimal fees for these services.
- ❖ Large Purchases are justified by the 23% of the respondents that Rarely use UPI Payments Facility.

Do you think that Covid-19 has increased the use of Online Payments?

100 responses



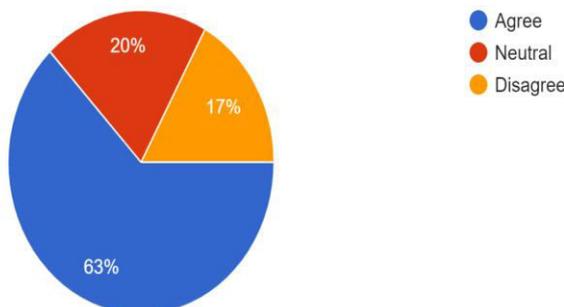
**Interpretation:**

- ❖ Majority of the respondents i.e 86 people agree that Online Payments have been popularised during the Covid 19 period in India.
- ❖ 7% of the respondents (7 people) are neutral about the effect of Covid 19 on Online Payments
- ❖ 7% of the respondents (7 people) disagree that Online Payments have increased due to Covid 19
- ❖ It can be concluded that due to the convenience that UPI payments offer, it became a boon for people in lockdown period. It became such a habit that even after things are back to normal people would prefer making UPI payments.

**Q10]**

Do you think that Online Payments are now popular in both Rural and Urban areas?

100 responses



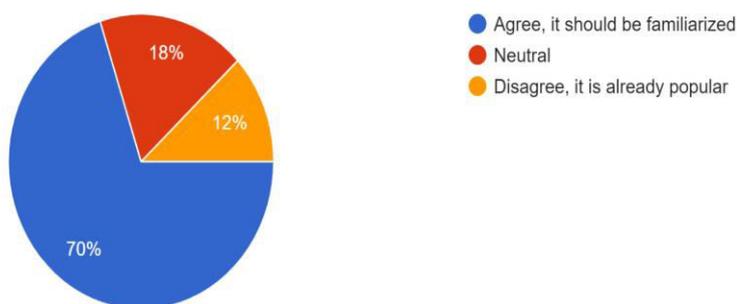
**Interpretation:**

- ❖ 63% of respondents (63 people) agree that Online Payments and UPI facilities are now popular in both Urban and Rural areas.
- ❖ 20% of the respondents (20 people) are neutral about popularisation of these services.
- ❖ 17% of respondents (17 people) disagree that Online Payments and UPI facilities are now popular in both Urban and Rural areas.
- ❖ This shows that people feel, due to their demand for acceptance of UPI at every store, majorly people have become familiarized by the idea of Online Payment services.
- ❖ 20% show the lack of knowledge in popularisation of Online Payment services and do not have a say regarding the same.

**Q11]**

Do you think that more people need to be educated about Online Payments?

100 responses

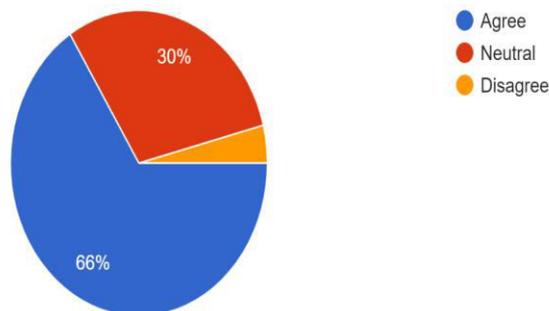


**Interpretation:**

- ❖ 70% of the respondents (70 people) feel the need to educate more people about Online Payment Services. Despite majority of them agreeing by saying the services are popular, not everybody is familiar with the usage of UPI.
- ❖ 18% of the respondents (18 people) are neutral about having to educate more people about Online Payments.
- ❖ 12% of the respondents (12 people) feel that it is already popular.
- ❖ The need to educate more people in India will always be there, familiarising a local shop owner to use UPI and increase sales to a huge corporation accepting UPI payments is the kind of versatility the youth is trying to achieve.

Do you think that going cashless would impact our economy in a Positive manner?

100 responses



**Interpretation:**

- ❖ 66% of the respondents (66 people) feel that by adapting a cashless nature, our economy would be impacted in a positive manner.
- ❖ 30% of the respondents (30 people) are neutral about the impact of going cashless.
- ❖ 4% of the respondents (4 people) disagree that going cashless would have a positive impact on our economy.

**V] FINDINGS & RECOMMENDATIONS**

**A. FINDINGS**

1. Out of the respondents, majority i.e. 58% (58 people) were male.
2. Out of the 100 respondents, majority of the data is collected i.e. 60% (60 Respondents) from Third Year Degree College Students being approximately of the age 19-20y. This shows that majority of the respondents are Adults (>18y of age)
3. Majority of the respondents (36%) use UPI Payments Facility on a daily basis.
4. 55% of the respondents (55 People) feel that the advancement of technology in Payments System has affected their spending or consumption patterns in a positive manner.
5. 46% of the respondents would prefer paying via UPI and other online facilities. One of their major motivation to do so is the Convenience that UPI offers from paying via a mobile.
6. 72% of the respondents (72 people) prefer to use UPI Facility as their mode of online payments
7. 44% of the respondents (44 people) are concerned about Frauds while making online payments.
8. 44% of the respondents (44 people) use UPI and Online Payment Services to buy Food, Beverages and Groceries, majorly consisting daily necessity items.
9. Majority of the respondents i.e 86 people agree that Online Payments have been popularised during the Covid 19 period in India.
- 10.63% of respondents (63 people) agree that Online Payments and UPI facilities are now popular in both Urban and Rural areas.
- 11.70% of the respondents (70 people) feel the need to educate more people about Online Payment Services.
- 12.66% of the respondents (66 people) feel that by adapting a cashless nature, our economy would be impacted in a positive manner.

**SUGGESTIONS & RECOMMENDATIONS**

1. It is crucial to educate the public about e-wallets and cashless transactions because many people in our country stay in rural areas where UPI is not that popular.
2. The main reason why Digital Payments was a concern to the public was due to the fear of frauds. Government should incorporate a stricter cyber security system so that people have trust in them and would start using it frequently.

3. Better Internet Connectivity should be provided at all places to access UPI. And for a later stage, UPI Apps can be updated to such a technology system where it does not require the use of internet connectivity. It can be done via satellite connections.
4. The demand that emerged after demonetisation was a major factor in the initial surge in UPI usage, but in order to maintain this growth, the industry needs to develop a variety of use cases for UPI payments, much to how digital wallets have benefited from including a variety of use-cases.

**B. CONCLUSION**

This study began by examining the definition of an online or digital payment and a digital wallet in India. The following section of this study concentrated on several digital wallets or online payment applications in India and examined their benefits and drawbacks.

Credit cards, Debit cards, Internet Banking (NEFT/IMPS/RTGS), Mobile banking, Digi-wallets, Aadhar enabled Payment Service (AePS), and the Unified Payments Interface (UPI) are the different options available for digital payments and transfers. UPI offers superior advantages through services such as instant payment using QR code, payment of various fees, fund transfers between bank accounts & wallets, donations, buying & renewal of insurance, payment of utility bills through Bharath BillPay, etc. The concern that consumers have is their security, their privacy being hacked or leaked, high transaction charges etc.

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**COVID 19 AND E-COMMERCE****Prasanth Rajan**

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**ABSTRACT**

*Online Shopping is fast growing in India enabling consumers to shop according to their convenience. The introduction of smart phones and growth of internet technology has transformed new shopping experience in India. The purpose of this research is to explore the factors which led to increase in Online shopping amongst Indian consumers. The coronavirus pandemic has taken a toll over the entire world and forced people to stay at their home. This resulted in an increased use of online shopping. This research is basically comparing before and after COVID-19 impact on E-Commerce industry. This study will also explain the factors which influence E-Commerce in India.*

**INTRODUCTION**

E-commerce has changed the way business is carried out in India. Attractive and convenient shopping methods at the core of the consumer facing business, the e-commerce industry offers the power to create innovative, sustainable, consistent and seamless shopping experience across all channels. In India, E-Commerce is one of the fastest growing trade sectors now a day. In India E-Commerce was first introduced by K.Vaitheeswaran in 1999 and started Fabmart.com, later acquired by Aditya Birla group and rebranded to more. Now a days, we have been watching the growth of Online Shopping giants such as Flipkart, Amazon, Snap Deal, E-bay etc.

Covid-19 pandemic forced people to stay at their own home. The lockdowns imposed in the early outbreak of corona has disrupted people. Customers don't want to step outside unless there is an emergency. Consumers prefer to online shopping sites than stepping out and purchasing the products from retail outlets, super markets etc. The products purchased vary from essential goods to branded goods of luxury class. This also has created a need for the retail outlets/wholesalers to sell the products via online stores. It has been rightly said that in the most unfortunate times there lies a room of hope for some. The outbreak of the Covid-19 pandemic created a defining moment for the Indian e-commerce industry. According to IBEF report, E-commerce industry in India is expected to touch \$200 billion by 2026 from \$30 billion in 2017.

E-Commerce sites uses Electronic / digital payments. E-Payments have revolutionized the business by reducing transaction costs. During pandemic this also played a huge role in shifting consumers to online shopping. There are different modes of digital payments such as Credit / Debit Card, UPI, Electronic fund transfer etc. used by consumers to shop online. A report showed that Credit cards have overtaken debit cards for e-commerce and bill payments due to several reasons, including the pandemic as well as the increase in disposable income of the salaried segment.

This study specifically examines various factors which influence consumers towards e-commerce and the effect of COVID-19 on e-commerce. The paper contains a brief review of the literature on ecommerce and followed by data collection. Further, data analysis is done and an attempt is made to measure the identified important factors which influence online shopping and also measured the change in e-commerce due to COVID-19. Finally, we make conclusions on factors using results from data analysis that influence positively to choose e-commerce services and the impact of COVID-19 on e-commerce services.

**LITERATURE REVIEW**

A brief review of selected studies has been presented below:

**Bhatti et al. (2020)** examines that e-commerce grew due to coronavirus. E-commerce is became a substitute source and considered top in this condition and consumers bought in superstore traditionally. Coronavirus impact on whole e-commerce. Meanwhile we want to comprehend their efficiency to stability both cost and benefits as well as connected actions in coming upcoming.

**Neger and Uddin (2020)** mentioned in their study that less time consuming, convenient mode of payment and other organizational factors influence the online purchasing behavior. But after covid-19, there are various other factors or drivers which motivate the customers for online shopping. Limited movement among people, COVID-19 fear, rapid growth of mobile devices, and scarcity of products in physical stores, Convenience and Time saving and Digital transformation of local kirana shops are the main drivers of online buying post COVID-19.

Sharma (2020) make a research about ecommerce market in India after covid-19 pandemic. Results show that popularity of ecommerce increase after the advent of covid-19 pandemic by 17% and expected to rise further, sectors such as electronics, fashion and accessories, health and pharmacy did particularly well, with an average growth of 133% in sales.

According to Kumar et al. (2018) there is an effect on the speed of the internet data being provided due to the high demand in the consumption as people are more engaged to the video chats, online learnings and video conferencing tools which needs high speed of internet Business to Business (B2B) representatives face security concerns.

Charumathi and RANI (2017) mentioned that online buying or E-buying is a kind of electronic business that provide services to shoppers to purchase goods or services from an e-retailer by using Internet technology with the help of web browser directly.

**OBJECTIVES:**

1. To understand various factors affecting consumer’s purchase through E-Commerce in India.
2. To understand the impact of COVID-19 on E-commerce.
3. To study the impact of digital payments on E-Commerce

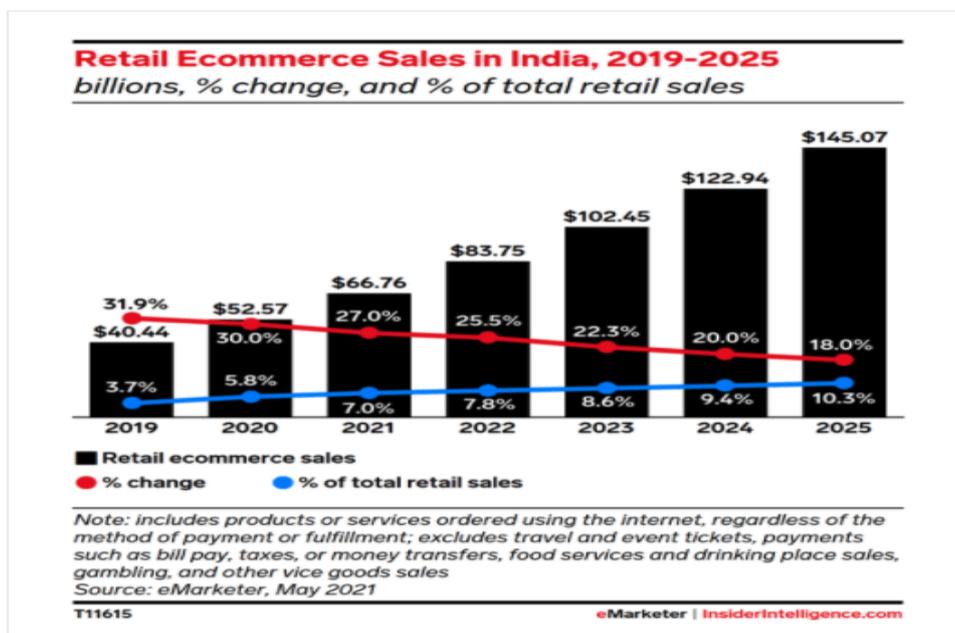
**RESEARCH METHODOLOGY**

The research methodology used for this study is descriptive based on secondary data, which includes published reports, published research papers in international journals, national journals and existing literature about this topic.

**DATA ANALYSIS AND INTERPRETATION**

In India, Internet penetration rate went up to nearly around 47% in 2021, from just about 10.1% in 2011. The figure seems relatively low; it meant that nearly half of the population of 1.37 billion people had access to internet. A report showed that the country’s digital population amounting to approximately 658 million active users as of February 2022. This ranked our country, the second in the world in terms of active internet users. The study also revealed that Indian consumers prefer mobile phones as the most preferred device to access internet. The number of internet users in India has increased over the years in both urban and rural areas due to introduction of smart phones, demonetization, attractive and affordable internet schemes irrespective of consumers’ income levels and socio-economic classes by various service providers.

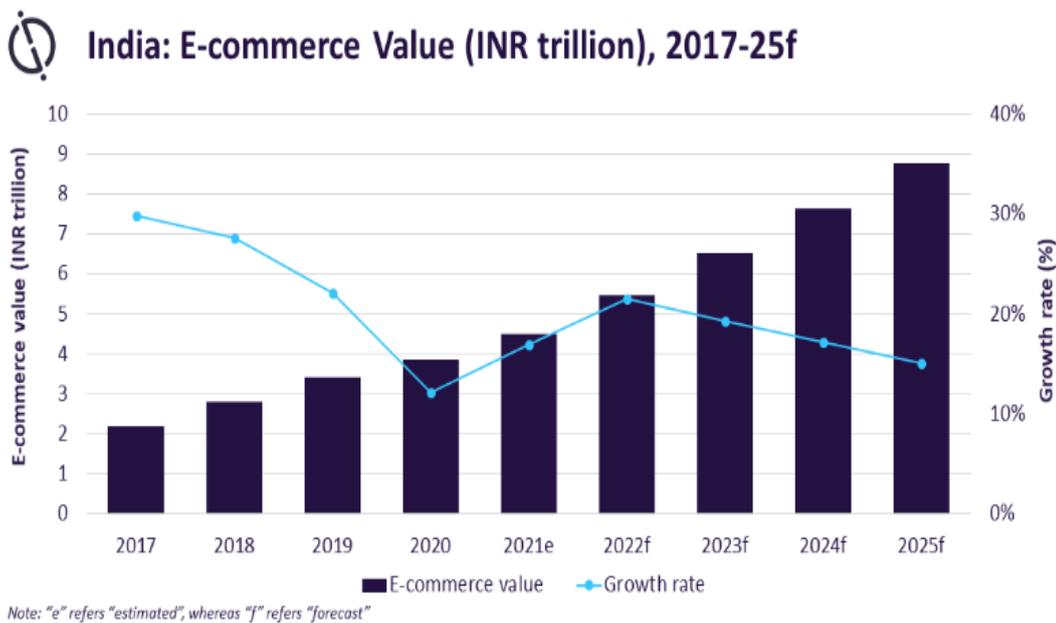
In July 2022, the report published by Statista Research Department showed that in 2020, there were approximately 150 million online shoppers annually, compared to about 135 million online shoppers in 2019 in India. This increase can be attributed to the growth of the e-commerce industry in India and to the COVID-19 pandemic, which led to a change in the shopping behaviour of the consumers. In 2022, the number of online shoppers will be increased further.



India has a lot of potential in the E-commerce industry. Growing at an exponential rate, the e-commerce sales in India was approximately 40.44 billion U.S dollars in 2019. This number is estimated to reach 145.07 billion U.S. dollars by 2025.

Discounts and EMI's added with a comfort of purchasing by sitting at home has become an effective driving factor of E-commerce. Availability of various websites gives customers a lot of options for comparison of products. Chatbots and personal assistance applications have made transactions seamless. One can get several brands and latest products from different sellers at one place.

In recent times, a report showed that electronics has emerged as the leading category, with a 34% share of gross merchandise value (GMV) in total E-commerce sales for the year 2020. It was followed by fashion and apparel (26%), food and groceries (24%), furniture and appliances (5%), with an increasing user base. For the 2021 festive season alone, Indian e-commerce platforms generated sales worth US\$ 9.2 billion gross GMV, a 23% increase from last year's US\$ 7.4 billion.



Source: GlobalData Banking and Payments Intelligence Center



The Indian Government's policies and regulatory frameworks such as 100% Foreign Direct Investment (FDI) in B2B E-commerce and 100% FDI under automatic route under the marketplace model of B2C E-commerce are expected to further propel growth in the sector. As per the new FDI policy, online entities through foreign investment cannot offer the products which are sold by retailers in which they hold an equity stake.

Through its Digital India campaign, the Government is aiming to create a trillion-dollar online economy by 2025. It has formed a committee that will look after the development of a government-based E-commerce platform. The new committee, set up by the Ministry of Commerce, will provide oversight on the policy for the Open Network for Digital Commerce (ONDC), which is an e-commerce platform that the government is backing for the development. The ONDC will serve as the infrastructure for setting up the final storefront, which will be similar to Flipkart and Amazon.

**CONCLUSION**

Covid-19 has created a revolution in the E-Commerce business forcing even the retail outlets to digital mode. The pandemic provided a strong stimulus to all digital services. Large E-retailers have started creating scale ecosystems, serving as a one-stop shop for digital and retail needs. The mobiles and electronics categories witnessed a one-time growth; regular use categories such as grocery, household, and personal care saw continued pace; and discretionary categories such as fashion and travel products saw relatively slower growth but have started rebounding in 2021. E-retailers played a critical role in maintaining essential food and hygiene products for millions of Indian households during the lockdowns. Delivery of products across all locations in India allowed consumers to stay safe at home and prevent the spread of this disease. Simultaneously, E-retailers helped India's small sellers and brands overcome go-to-market barriers and reach consumers despite widespread disruption.

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**APPLICATION OF TIME SERIES ANALYSIS IN START-UPS****Mrs. Suchandana Dutta<sup>1</sup> and Ms. Priya Maurya<sup>2</sup>**<sup>1</sup>Assistant Professor, Department of Statistics, Thakur College of Science and Commerce<sup>2</sup>Student, TY BSc, Department of Statistics, Thakur College of Science and Commerce**ABSTRACT****Introduction:**

*When a series of data points are indexed in time order in Mathematics or Statistics, it is known as Time series. Basically, it is a sequence of data taken at successive intervals of time. Hence, in short, we can define Time Series as a sequence of discrete time data which is used for analysis or used for future studies. This series can be used for forecasting or predicting future data based on past or historical data in spite of the limitations such as generalisation from a single study, difficult in obtaining appropriate measures and accuracy of correct model for data representation. On the other hand, an entity, which is an initiative of Government of India, having its headquarter in India, opened less than 10 years ago and having turn over of less than 100 crores is called a start-up. It was launched in 2016. Start-ups are founded by one or more entrepreneurs who try to develop a product, which they believe in demand. The main objectives of the paper can be mentioned as follows:*

*The amateur entrepreneurs of the start-ups can predict the funds required to start their business.*

*The analysis of the future prediction of funds becomes easy by using the Time Series analysis.*

*Since the time series analysis is used to see how an economic variable changes over time, its analysis plays a pivotal role in starting a start-up.*

**Methodology:**

*The method which is used here is the Auto-Regressive Integrated Moving Average (ARIMA) model which is used to estimate the fund required to start a start-up business. The data of 10 cement companies were taken into consideration and then using R-software the net revenue was calculated. The average of all the 10 values gave an estimate of the required fund.*

**Result:**

*The key findings based on objectives are that if an amateur entrepreneur wants to start a business on his own or along few others, then taking the data from few of the companies of the same genre, fitting them in the ARIMA model of Time Series, and then taking the average, a lump sum fund can be estimated of that particular company.*

**Contribution:**

*ARIMA model is a new technique which the entrepreneurs can use to predict the fund required to start their business with the simple know-how of R-software.*

*Keywords: Time-series, start-ups, models, analysis, ARIMA, forecast.*

**INTRODUCTION**

Start-ups are entities launched by the Government of India in the year 2016. These are the business houses found by one or more entrepreneurs who want to develop a product or service which are in the demand according to them. These types of companies generally start with limited revenue but high costs. Since the costs are high, they look for the capital from a variety of sources such as venture capitalists, family and friends, crowdfunding and loans. Legal structure is also to be noted for the start-ups. In spite of the fact that the failure possibility of start-ups is very high, the amateur entrepreneurs can also be very unique places to work with great benefits and focus on innovation and learning opportunities.

Basically, start-ups are companies or ventures which are focused on single product or service which are in demand. These start-ups do not have a fully developed business model and lack adequate capital to move onto the next phase of business.

One of the strongest venture capitalist communities is the Silicon Valley which is a popular destination for start-ups. To begin with the start-ups, the amateur entrepreneurs have to first have a notion about the capital to be invested. This can be very well done with the help of the statistical tool "Time Series". Taking into consideration the various factors like the revenue, man power, cost of raw material, advertisement, packaging,

delivery, etc. as the variables and putting them in the Auto Regressive Integrated Moving Average (ARIMA) model, we found out the capital required for a start-up.

The starting of a start-up by amateur entrepreneurs first hurdle is to collect the required fund. This can be very easily done by the use of the ARIMA model of time series for those who are well accustomed with R-software. Here, data of 10 cement companies are taken and put in the ARIMA model. Average of these values gave us a lumpsum amount required to start a cement company. This method is user friendly and the values can be easily predicted.

This paper throws light on the following important motivating factors:

Stimulation of Researcher

Sense of Participation

Growth of Knowledge

Curiosity to learn the know-how of a new company

Dynamics of team

**LITERATURE REVIEW**

The purpose of this paper is to present a review on the application of the statistical tool “Time Series” on the start-up business. It is found and proved by many researchers that the small business or the start-ups are generally less efficient if compared to large companies with huge turnover. It is also concluded that the level of compensation is low for employees in start-ups or small business. The survival of such start-ups is due to specialisation of products with shorter production runs. The government is keenly encouraging such budding entrepreneurs. Even many fund such start-ups and act as incubators also. The encouragement from the FDI policies is also commendable which encourages overseas funding. “The Wall Street Journal” has also mentioned the same. Now the time series plays a very crucial role in the beginning of a small business venture or start-up. A sequence series of numerical data points fixed at certain chronological time order is known as time series. This helps the entrepreneurs to forecast or predict how much investment should be made to start a new venture to get efficient output. Forecasting takes the help of previous data and use them in a particular model to predict the future observation. Time series can never give the exact forecast but helps in predicting or estimating. Here we apply Auto Regressive Integrated Moving Average (ARIMA) model to estimate the budget to start a new small venture or start-up.

**Identification of Variables:**

Time series usage are of two-fold

Helps in understanding the forces and structure that produces the data.

Forecasting is done by fitting up a model.

Here, we use ARIMA (Auto Regressive Integrated Moving Average) method which is one of the most widely used model in Time Series. ARIMA is a forecasting method that helps to furnish future values (budget of start-ups) which is based on its inertia and includes a statistical model for the asymmetrical component of a time series. This allows non-zero autocorrection is the regular component. So, ARIMA is a forecasting algorithm based on the idea that the information in the past values of the time series can alone be used to predict the future values.

The AR model is

$$Y_t = \alpha + \beta_1 Y_{t-1} + \beta_2 Y_{t-2} + \dots + \beta_p Y_{t-p} + \varepsilon_t + \phi_1 \varepsilon_{t-1} + \phi_2 \varepsilon_{t-2} + \dots + \phi_q \varepsilon_{t-q}$$

where  $Y_{t-1}$  = lag 1 of the series

$\beta_1$  is the co-efficient of lag 1 that the model estimates

$\alpha$  is the intercept term, also estimated by the model.

ARIMA in words:

Predicted  $Y_t$  = constant( $\alpha$ ) + Linear combination lags of Y (upto p lags) + linear combination of lagged forecast errors (upto q lags), lag 1 (1<sup>st</sup> difference)

If the autocorrection are positive for many number of lags (10 or more), then the series needs to be differentiated further. On the other hand, if lag 1 autocorrection itself is too negative, then the series is probably over differenced.

The AR model is represented by:

$$X_t - \alpha_1 X_{t-1} - \dots - \alpha_p X_{t-p} = \varepsilon_t + \theta_1 \varepsilon_{t-1} + \dots + \theta_q \varepsilon_{t-q},$$

where  $X_t$  is the time series data,  $t$  is an integer index and the  $X_t$  are real,  $\alpha_i$  are the parameters of the autoregression part of the model, the  $\theta_i$  are the parameters of the moving average part and the  $\varepsilon_t$  are the error terms. The error terms  $\varepsilon_t$  are generally assumed to be independent, identically distributed variables sampled from a normal distribution with zero mean.

Differencing in statistics is a transformation applied to a non-stationary time series in order to make it stationary in the mean sense (i.e., to remove the non-constant trend) but having nothing to do with the non-stationarity of the variance or autocovariance.

The final objective of the model is to predict future time series movement by examining the differences between values in the series instead of through actual value.

[To select the best ARIMA model, the data is split into two period, namely estimation period and validation period]. The model for which the values of criteria are smallest is considered as the best model.

**Sample Design**

We have taken the data of 10 well known cement companies, they are-

Ultratech Cement

ACC Cement

Ambuja Cement

Mangalam Cement

Shree Cement

JK Lakshmi Cement

Ramco Cement

Orient Cement

India Cement

Heidelberg Cement

**Calculations:**

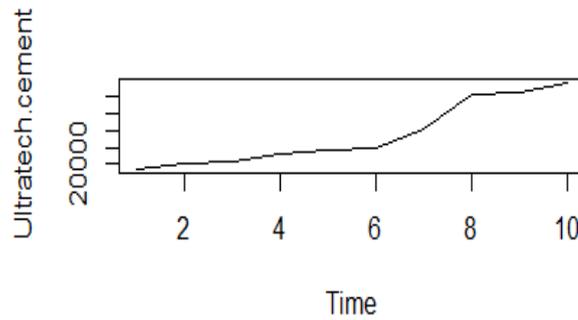
**Ultratech Cement**

Sr No.	year	cost of raw material	man power (employee expenses)	selling and administration expenses	miscellaneous expenses	revenue
1	2021	5174.94	2181.99	11120.6	1168.69	43977.02
2	2020	4960.81	2336.17	11097.1	1201.6	41375.75
3	2019	5039.32	2158.29	11523.8	1000.45	40495.47
4	2018	3978.36	1706.24	8250.85	935.71	30384.8
5	2017	3467.82	1413.44	7039.96	650.14	24551.38
6	2016	3550.88	1343.02	7116.23	588.11	24189.45
7	2015	3280.62	1218.29	6883.16	518.22	23307.95
8	2014	2910.95	1014.63	5420.97	451.09	20608.84
9	2013	2792.12	968.35	4991.59	377.37	20484.96
10	2012	2377.7	831.04	4369.71	379.14	18685

Code: plot.ts (Ultratech.cement)

Output

Comment: Not stationary



Using adf test

Code: `adf.test(Ultratech.cement)`

Output : data: Ultratech.cement

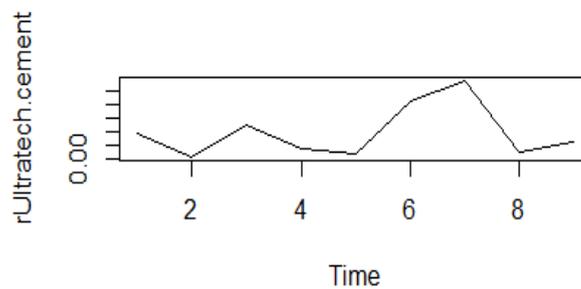
Dickey-Fuller = 0.47821, Lag order = 2, p-value = 0.99

Since p value is greater than 0.05 data is not stationary

Now we will convert into stationary

Code: `rUltratech.cement = diff(log(Ultratech.cement))`

`plot.ts(rUltratech.cement)`



**Comment:** Stationary

Again we will check using adf test

`adf.test(rUltratech.cement)`

Output:

data: rUltratech.cement

Dickey-Fuller = -25.306, Lag order = 2, p-value = 0.01

Since p value is less than 0.05 data is stationary.

**Now best fit ARIMA model**

**CODE:** `auto.arima (rUltratech.cement)`

Output:

Series: rUltratech.cement

ARIMA(0,0,0) with non-zero mean

Coefficients:

mean

0.0951

s.e. 0.0306

$\sigma^2 = 0.009496$ : log likelihood = 8.72

AIC=-13.43 AICc=-11.43 BIC=-13.04

Model

CODE: modelrUltratech.cement = arima(rUltratech.cement, order = c(0,0,0))

modelrUltratech.cement

OUTPUT:

Call:

arima(x = rUltratech.cement, order = c(0, 0, 0))

Coefficients:

intercept

0.0951

s.e. 0.0306

$\sigma^2$  estimated as 0.008441: log likelihood = 8.72, aic = -13.43

Final equation:

$rUltratech.cement = 0.0951 + rUltratech.cement (t-1)$

**ACC**

Sr No.	year	cost of raw material	man power (employee expenses)	selling and administration expenses	miscellaneous expenses	revenue
1	2021	2120.28	834.02	4295.95	905.82	16356.11
2	2020	4245.47	839.07	5190.22	716.18	13988.52
3	2019	5389.44	863.97	5168.59	745.15	15967.86
4	2018	5368.35	881.06	4843.97	737.15	14939.85
5	2017	4696.97	818.95	4081.9	795.74	13416.25
6	2016	3744.36	778.31	1128.8	1017.21	11271.05
7	2015	4133.83	769.87	3244.5	824.41	11916.18
8	2014	4230.13	746.59	2918.63	818.43	12006.49
9	2013	4003.82	661.68	2713	1036.84	11392.73
10	2012	3987.78	616.65	2370.36	496.84	11622.78

Code:

auto.arima (ACC)

ModelACC = arima(ACC, order = c(0,1,0))

ModelACC

Output:

ARIMA (0, 1,0)

$\Sigma^2 = 2039714$ : log likelihood = -78.15

AIC=158.3 AICc=158.87 BIC=158.49

Call:

Arima(x = ACC, order = c(0, 1, 0))

$\Sigma^2$  estimated as 2039699: log likelihood = -78.15, aic = 158.3

**Ambuja Cement**

Sr No.	year	cost of raw material	man power (employee expenses)	selling and administration expenses	miscellaneous expenses	revenue
1	2021	1134.25	677.65	3435.8	485.68	14250.59
2	2020	3126.79	668.78	3706	516.68	11743.86
3	2019	3580.84	672.63	3842.31	676.22	12094.4
4	2018	3558.92	679.57	3401.49	528.77	11731.74
5	2017	3142.4	661.37	3034.87	531.15	10816.19
6	2016	2608.64	590.93	3113.06	503.52	9706.85
7	2015	2850.05	589.52	2969.09	460.58	9819.59
8	2014	3059.51	581.58	2241.61	474.06	10407.1
9	2013	2709.09	502.41	2158.2	644.77	9553.97
10	2012	3000.83	478.51	1929.99	312.7	10079.17

auto.arima (Ambuja.Cement)

Model Ambuja.Cement = arima (Ambuja.Cement, order = c(0,1,0))

Model Ambuja.Cement

Output:

arima(x = Ambuja.Cement, order = c(0, 1, 0))

sigma^2 estimated as 1107612: log likelihood = -75.4, aic = 152.8

**Mangalam Cement**

Sr No.	year	cost of raw material	man power (employee expenses)	selling and administration expenses	miscellaneous expenses	revenue
1	2021	196.72	111.09	366.6	19.43	1331.18
2	2020	197.19	108.77	339.51	37.17	1257.98
3	2019	199.27	88.94	375.94	22.59	1223.49
4	2018	198.89	88.08	344.03	20.24	1149.48
5	2017	153.36	77.94	275.43	20.5	1065.72
6	2016	135.81	72.45	265.93	18.69	848.34
7	2015	156.82	57.73	272.89	17.92	925.78
8	2014	116.63	42.58	223.12	14.68	701.94
9	2013	112.5	38.12	214.02	12.57	713.14
10	2012	85.39	32.29	177.96	13.57	637.4

auto.arima (Mangalam.Cement)

modelMangalam.cement = arima(Mangalam.Cement, order = c(0,1,0))

modelMangalam.cement

Series: Mangalam.Cement

ARIMA (1,1,0) with drift

Coefficients:

ar1 drift

-0.6852 77.3467

s.e. 0.1996 12.5890

Sigma^2 = 4737: log likelihood = -50.04

AIC=106.08 AICc=110.88 BIC=106.67

**Shree Cement**

Sr No.	year	cost of raw material	man power (employee expenses)	selling and administration expenses	miscellaneous expenses	revenue
1	2021	2866.91	759.72	3754.6	239.34	13046.39
2	2020	3110.89	731.01	3231.74	229.02	12175.62
3	2019	3639.85	677.82	3487.55	544.62	11967.4
4	2018	2748.71	588.05	3044.64	187.95	10222.15
5	2017	2124.93	537.18	2423.74	227.51	8956.07
6	2016	1572.25	369.86	1512.03	110.67	6186.32
7	2015	2159.35	455.03	1863.18	135.51	6591.42
8	2014	1842.56	395.3	1601.59	152.1	6072.25
9	2013	2050.89	314.25	1258.8	57.62	5778.58
10	2012	2078.91	319.49	1235.04	66.24	6060.9

auto.arima (Shree.Cement)

modelShree.Cement = arima(Shree.Cement, order = c(0,1,0))

modelShree.Cement

Output:

Series: Shree.Cement

ARIMA (0,1,0) with drift

Coefficients:

drift

776.1656

s.e. 320.1035

Sigma^2 = 1037461: log likelihood = -74.58

AIC=153.15 AICc=155.15 BIC=153.55

**JK Lakshmi Cement**

Sr No.	year	cost of raw material	man power (employee expenses)	selling and administration expenses	miscellaneous expenses	revenue
1	2021	1451.61	326.98	218.57	32.53	4459.18
2	2020	611.35	311.96	239.26	31.02	4093.58
3	2019	714.99	259.86	1153.07	1.07	3938.6
4	2018	584.15	234.95	1032.76	0	3480.25
5	2017	524.94	208.39	861.24	0.54	2980.22
6	2016	497.72	196.97	709	90.55	2680.13
7	2015	398.69	146.11	622	63.25	2335.26
8	2014	361.64	122.95	551.34	18.7	2100.87
9	2013	337.14	113.22	516.01	16.44	2110.4
10	2012	285.98	98.39	407.99	11.74	1781.5

auto.arima (JK.Lakshmi.Cement)

modelJK.Lakshmi.Cement = arima(JK.Lakshmi.Cement, order = c(0,1,0))

modelJK.Lakshmi.Cement

Output:

Series: JK.Lakshmi.Cement

ARIMA (0,1,0) with drift

Coefficients:

drift

297.5200

s.e. 48.8548

$\sigma^2 = 24166$ : log likelihood = -57.66

AIC=119.32 AICc=121.32 BIC=119.71

**Ramco Cement**

Sr No.	year	cost of raw material	man power (employee expenses)	selling and administration expenses	miscellaneous expenses	revenue
1	2021	818.84	402.13	1287.41	35.08	5303.08
2	2020	921.15	368.2	1520.32	46.58	5405.64
3	2019	828.59	329.49	1470.93	53.99	5174.71
4	2018	736.68	303.98	1182.45	32.51	4443
5	2017	624.38	277.73	983.38	16.08	3993.05
6	2016	584.34	259.23	842.21	30.78	3687.09
7	2015	677.33	228.68	992.87	23.4	3731.77
8	2014	669.86	221.83	1020.19	31.04	3769.23
9	2013	575.27	196.02	962.59	45.59	3872.66
10	2012	437.6	171.21	726.21	17.94	3287.78

auto.arima (Ramco.Cements)

modelRamco.Cements = arima(Ramco.Cements, order = c(0,1,0))

modelRamco.Cements

Output:

Series: Ramco.Cements

ARIMA (0,1,0) with drift

Coefficients:

drift

223.9222

s.e. 99.3954

$\sigma^2 = 1e+05$ : log likelihood = -64.05

AIC=132.1 AICc=134.1 BIC=132.49

**Orient Cement**

Sr No.	year	cost of raw material	man power (employee expenses)	selling and administration expenses	miscellaneous expenses	revenue
1	2021	1363.73	152.54	920.34	30.65	2342.44
2	2020	238.87	154.86	950.47	34.93	2439.52
3	2019	305.18	154.77	1101.71	35.07	2536.14
4	2018	272.5	138.5	901.77	42.6	2242.57
5	2017	264.61	118.39	739.33	38.29	1887.03
6	2016	210.75	89.78	557.18	25.77	1469.98
7	2015	213.49	71.33	498.82	25.42	1552.95
8	2014	247.11	58.21	470.48	22.36	1447.73
9	2013	231.68	52.22	422.98	23.23	1506.28
10	2012	0	0	1.56	0.03	0

auto.arima (Orient.Cements)

modelOrient.Cements = arima(Orient.Cements, order = c(0,1,0))

modelOrient.Cements

Output:

Series: Orient.Cements

ARIMA (0,1,0)

sigma^2 = 299505: log likelihood = -69.51

AIC=141.03 AICc=141.6 BIC=141.23

**India Cement**

Sr No.	year	cost of raw material	man power (employee expenses)	selling and administration expenses	miscellaneous expenses	revenue
1	2021	701.5	331.03	1353.92	23.06	4460.12
2	2020	925.88	349.89	1706.15	120.81	5085.28
3	2019	1044.4	357.14	1830.4	11.01	5658.96
4	2018	901.38	397.1	1728.97	28.02	5360.13
5	2017	895.65	377.85	1716.13	20.31	5794.04
6	2016	686.32	343.1	1336.4	25.63	4249.01
7	2015	624.2	318.15	1481.9	16.76	4454.4
8	2014	605.45	351.31	1539.64	167.32	4529.84
9	2013	577.4	333.94	1490.98	18.09	4615.67
10	2012	541.03	302.63	1231.87	12.63	4222.69

auto.arima (India.Cement)

modelIndia.Cement = arima(India.Cement, order = c(0,0,0))

modelIndia.Cement

Output:

ARIMA (0,0,0) with non-zero mean

Coefficients:

mean

4843.0140

s.e. 175.5388

sigma^2 = 342373: log likelihood = -77.38

AIC=158.76 AICc=160.48 BIC=159.37

**Heidelberg Cement**

Sr No.	year	cost of raw material	man power (employee expenses)	selling and administration expenses	miscellaneous expenses	revenue
1	2021	368.55	127.34	390.38	23.3	2163.13
2	2020	383.59	131.19	404.36	34.55	2222.35
3	2019	391.52	123.9	423.2	17.14	2168.17
4	2018	356.64	120.15	397.91	15.3	1909.4
5	2017	325.99	114.76	335.28	14.68	1741.15
6	2016	342.78	105.02	408.65	13.12	1670.79
7	2015	443.83	133.73	477.81	20.69	2058.12
8	2014	282.26	96.67	352.11	-51.66	1216.21
9	2013	313.31	92.37	96.17	-88.94	1114.42
10	2012	271.01	78.17	93.75	12.24	999.8

auto.arima (Heidelberg.Cement)

modelHeidelberg.Cement = arima(Heidelberg.Cement, order = c(0,1,0))

modelHeidelberg.Cement

Output:

Series: Heidelberg.Cement

ARIMA (0,1,0)

Sigma<sup>2</sup> = 109889: log likelihood = -65

AIC=132.01 AICc=132.58 BIC=132.2

### **RESULT:**

Taking the revenues of all the 10 companies we get

total revenue of 10 companies = 1240.12 crores

mean of total revenue of these 10 companies = 124.012 crores

So, the revenue required to start up a cement company is 124.012 crores.

### **MANAGERIAL IMPLICATION**

Here, we explore the application of time series analysis in start-up is to get a knowledge about the fund required. We tried here to find a lump sum amount that is required to start a cement company using the ARIMA model. Time series models are used to analyse thousands of transactions in determining relationships detecting abnormalities and irregularities among dependent data. The application of time series is also used for the emergence of business sustainability which creates an opportunity for the amateur entrepreneurs to start their low-key business. The Government of India helps the entrepreneurs to start their business known as start-ups. This study tried to find the fund required to start a start-up of a cement company using the ARIMA model of time series analysis. Since time series is mainly used for forecasting, so here we used the data of 10 cement companies, the data being the total revenue for 10 years. The time series analysis sets as a link between sustainability performance and financial performance. The result calculated is an approximate value which will help an amateur entrepreneur to get an overview of the fund required to start a cement company. Then he/she can discuss the policy and the time series implications as how efficiently it can work to predict the fund required, cost efficiency and effectiveness of financial and non- financial information for making the decisions.

### **LIMITATIONS**

The findings of this research paper would help an entrepreneur to start a start-up. But multiple barriers and challenges exist for the start-ups to be able to create a clear picture of the fund required. In this paper we found out the fund required to start a cement company on the basis of the study of 10 companies applying time series ARIMA model there are lots of limitations and challenges which exist in spite of the study of this paper. Some of the limitations of using ARIMA are :

Poorer performance for long term forecasts.

Cannot be used for seasonal time series

There is quite a bit of subjectivity involved in determining (p,d,q) order of the model.

The entrepreneur should know R-software and the statistical analysis of time series too.

### **CONCLUSION**

We conclude hereby that if we have past data of few companies of the same industry, then they can be fitted in the ARIMA model of time series and if the average is taken, a lump sum amount to be invested by a start-up company can be estimated. The present-day society is transforming into digital areas due to the advancement of the technology. People have become more techno savvy and are aware of the modern-day technologies. This study of the starting of a start-up with the help of time series application using R-software very easily would help the young or amateur entrepreneurs. We have taken the data from the 10 well known cement companies and found out their yearly revenue. Then on finding their average we get a lump sum amount which is required to start a start-up. It is much easier to use this method then to apply the Data Analytics. It is a very easy method though there are multiple barriers and drawbacks too. The most important contribution is that an entrepreneur can get a clear view of the fund required without much know how of the latest technology.

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**OKHAI: AN INSIGHT INTO WOMEN ENTREPRENEURSHIP IN RURAL INDIA****Ananya Sambasivan**

Podar World College, BA (Hons) Business Management Level 5

**ABSTRACT**

*Entrepreneurship in a developing nation like India needs to grow and sustain in order to develop the economy. With economic development comes gender equality, and so within obtrusive patriarchal barriers, women must be given the opportunities to start up ventures and seek self-fulfillment and status. Whilst these opportunities are existing and plentiful in metropolitan India, rural areas have poor socioeconomic conditions, low literacy rates and fewer opportunities for skill development. NGOs and social enterprises aimed to close this gap, and hence, in 2002, Okhai became an initiative of the Tata Chemicals Society for Rural Development (TCSR) to bring together rural women artisans and sell their handicraft products. Okhai first and foremost tends to women artisans to heighten their entrepreneurial skillsets whilst preserving their rich history and culture through the brand's product range. Okhai sees success in the numbers of artisans they benefit, which increases tenfold because of technological changes brought on by the pandemic. Okhai could lead a new wave of rural entrepreneurship brought on by women artisans and raise rural women's standard of living and empower them to widen their capabilities to overcome societal stigma.*

*Keywords: Women Entrepreneurship, Rural India, Artisans*

**INTRODUCTION**

Within India, as a developing country, entrepreneurship is of increasing importance. In an era of women in India wishing to engage in economical and financial independence, women entrepreneurship has become a more viable option, though the field is male dominated. Though urban and metropolitan regions have access to resources for entrepreneurial skill enhancement, rural areas fall behind hence citizens suffer under poor socioeconomic conditions. This is where NGOs and social enterprises uptake roles to uplift the economy and develop infrastructure for women in rural areas to thrive and flourish. In the case of Okhai, an artisanal brand, they empower rural women in India to produce handicraft products to preserve the traditions of their tribes whilst becoming self-reliant and independent.

**LITERATURE REVIEW**

This review encompasses the concepts of women entrepreneurship, rural entrepreneurship, and their challenges within the Indian context.

The Government of India (2012) defines a women entrepreneur as one who possesses a majority financial stake in (51 per cent and above of the capital) running an enterprise. Women entrepreneurs have been given defining characteristics unique from their male counterparts. These include opportunity-driven women who take on the role of entrepreneurship to achieve independence, self-fulfillment and raising the status of women in society. Historically, women entrepreneurs were prevalent only within traditional and informal sectors of the Indian economy, however, over the course of the past decade, they have diversified into contemporary and emerging sectors (Tiwari, 2017).

Women entrepreneurs face various challenges to achieve their career goals. These challenges are faced on a larger scale under the patriarchal norms of Indian society, as the male-dominated area of business are more skeptical towards women's capabilities. Women entrepreneurs in are majorly found within metropolitan regions of India; nevertheless, a majority of whom face finance-related problems, paucity of raw materials, lack of education and experience and, most significantly, work-life balance especially for married women who bear high responsibility for the family. (Nair and Gakhar, 2014)

Rural entrepreneurship is the creation of a new organization that introduces a new product, serves or creates a new market, or utilizes a new technology in a rural environment (Wortman, 1990). Rural entrepreneurship empowers citizens residing in rural areas to improve their socio-economic status by lowering the gap of underdevelopment. This development can occur when villagers are given access entrepreneurship training courses to heighten their managerial, technical, entrepreneurial and personnel skills. In the 21<sup>st</sup> century, there has been increasing importance of sustainable rural entrepreneurship, so that villagers can reap the benefits of economic growth without the exploitation of resources especially in environmentally vulnerable areas (Ansari et al., 2013).

Artisans are concentrated in rural India and their production falls majorly under the unorganized sector. Rural artisans signify great cultural heritage, possessing village craft skills passed down generations to become the backbone of India's non-agricultural rural economy. Nevertheless, the artisanal industry is suffering from abysmal levels of poverty. This is due to illiteracy, having weak financial power, lack of skill improvement and falling behind technological advancements in the industry. (Banik, 2017)

From the above literature, it can be concluded that the Indian economy sees a minority of both women and rural entrepreneurs due to societal barriers, financial struggles as well as a lack of infrastructure and government support. However, as the economy develops, there is a paradigm shift in consumption patterns and business practices that empower minority groups and encourage sustainable business ventures.

## **OBJECTIVES & METHODOLOGY**

### **The Objectives of this Paper Are:**

1. To analyse the challenges of entrepreneurship faced by women and rural citizens,
2. To study Okhai's impact on women entrepreneurship in rural India,

In order to meet the objectives, the research has been conducted using secondary sources including but not limited to journals, articles and published data from OKHAI's website.

## **OKHAI & Women Entrepreneurship**

### **History & Mission**

Okhai is an Indian online apparel company founded by Kirti Poonia, with support from Tata Chemicals Society for Rural Development (TCSR) in 2002. It is a collective of women artisans mainly located in Gujarat's rural communities. The products offered by Okhai include apparel, accessories, lifestyle products and more. The products are created by the artisans who are employed for their talents, providing means to showcase their cultural heritage. (Tata group, 2017) Okhai's mission is to give women the chance to improve their standard of living by honing their talent of producing traditional designs, allowing them to boost their self-esteem and sense of worth. (OKHAI, 2022)

### **Practices**

#### **i) Production Process**

Okhai has its main production centre in Mithapur, wherein raw materials are sourced and finalised using online applications. This ensures the artisans work in an efficient environment, obtaining fabrics without additional intermediaries. The artisans are given leeway to work at their own capabilities and speed, including part-timers who can work from home so as to manage and multitask, an entrepreneurial trait. After product designs are determined by professional designers, they are sent back to the artisans as semi-stitched samples to kickstart the bulk cutting process. The cut cloth kits include every tool required for embroidery, along with Okhai team members who explain the designs and distribute the kits to rural artisans. Following embroidery, the batches of products would undergo a quality assurance process of benchmarking, and if the products met the mark, incentives would be given to the artisans. In addition, the artisans are not deducted payments for poor quality, so as to not jeopardise the women's income source. (Verma and Thakuria, 2022)

#### **ii) Self Help Groups (SHGs)**

Self Help Groups of Okhai encouraged women of Okhmandal to become members to undergo training after completing a skill test to assess their capabilities in handicraft. Once becoming a member, the group would keep track of the production process under the guidance of a head figure, known as pramukh. These SHGs are crucial in empowering women and encouraging an entrepreneurial culture of determination, patience and adaptability. (Verma and Thakuria, 2022)

### **Impact on Rural Artisans**

According to Kirti Poonia, Okhai's former CEO, Okhai's growth cannot be measured by turnover. Instead, the success and impact can be assessed on how many rural artisans Okhai can benefit. Within six years, Okhai's impact grew from working with 350 women artisans in Gujarat to 27000 women all across India. (Zakaria, 2022)

Poonia accredits a majority of Okhai's growth to the pandemic. Okhai provided tech support channel to create an e-commerce platform for artisans and customers to directly communicate through WhatsApp once booking on the website. The artisans were trained on improving product photography, updating inventory count and using tech panels for smooth communication. One Madhubani artisan named Ashalata grew 40% revenue in one month from these technological advancements. (Zakaria, 2022)

Aside from technological advancements, in honour of International Day of Rural Women, Okhai set up a Helpline for rural artisans to address their grievances, systemise their artisanal details and request for any assistance. The helpline is accessible on WhatsApp as well. The helpline is managed by volunteers of the Creative Dignity group who provide support to artisans in all areas of the country working in the handicraft industry and empower rural women to gain self-reliance, a vital entrepreneurial trait. (Tata Chemicals, 2020)

### CONCLUSION

With an ever-expanding national reach, Okhai can lessen the struggles of women entrepreneurship in rural areas by providing training, support, guidance, and personal involvement for rural women to harness their handicraft skills and use them as a means of self-employment. Through the shift of conscious consumerism, sustainable brands such as Okhai are able to market themselves through the transparency of their supply chain by showing the direct benefits gained by the women in their association. Okhai gives rural women access to technological and digital enhancements to aid in the process and ensure orders are met on time. Okhai has the potential to extend its support to not only rural women, but also rural citizens of all non-binary gender identities, castes, and social standings to enforce an entrepreneurship culture beyond self-reliance to aid the overall economic development of India.

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MSME REGISTRATION: ONLINE PROCESS AND BENEFITS IN INDIA

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**ABSTRACT**

Micro, Small & Medium Enterprises (MSMEs) have significantly contributed to the expansion of entrepreneurial ventures through business innovations. MSMEs are expanding across sectors of the economy to meet the demands of domestic and global markets with diverse products and services. Indian MSMEs play a critical role by creating large employment opportunities at a comparatively lower capital cost than large industries, as well as industrializing rural and backward areas, thereby reducing regional imbalances and ensuring a more equitable distribution of wealth and income. Despite this, most MSMEs are unregistered and do not benefit from the Ministry's programs. In this paper, we aim to inform unregistered MSMEs about the process and benefits of Udyam registration, and to encourage them to do so.

Keywords: MSME registration, Udyam Portal, MSME Schemes, E-Commerce adoption

**MSME (Meaning):**

**Existing and Revised Definition of MSMEs**



Existing MSME Classification			
Criteria : Investment in Plant & Machinery or Equipment			
Classification	Micro	Small	Medium
Mfg. Enterprises	Investment <Rs. 25 lac	Investment <Rs. 5 cr.	Investment <Rs. 10 cr.
Services Enterprise	Investment <Rs. 10 lac	Investment <Rs. 2 cr.	Investment <Rs. 5 cr.
Revised MSME Classification			
Composite Criteria : Investment And Annual Turnover			
Classification	Micro	Small	Medium
Manufacturing & Services	Investment <Rs. 1 cr. and Turnover <Rs.5 cr.	Investment < Rs. 10 cr. and Turnover < Rs.50 cr.	Investment < Rs. 20 cr. and Turnover < Rs.100 cr.

(Ref: Gazette No: CG-DL-E-01062020-219680 dated 1<sup>st</sup> June, 2020)

**MSME Registration Guidelines and Process:**

The Ministry of MSME launched a portal - 'Udyam Registration Portal' on 1st July 2020. The process of filing 'Udyog Aadhaar Memorandum' has been replaced by 'Udyam Registration'. It is now possible for existing and prospective entrepreneurs to file their 'Udyam' Registration' online at <https://udyamregistration.gov.in>.

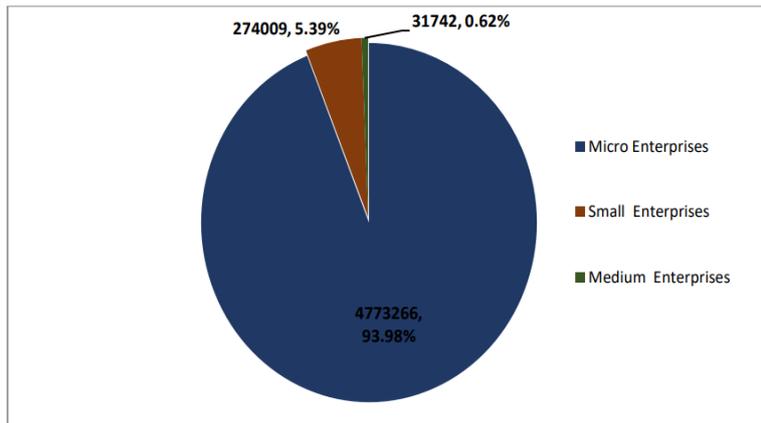
**Guidelines for Udyam Registration:**

- 1) The registration form shall be available on the Udyam Registration portal.
- 2) No fee will be charged for filing an Udyam Registration.
- 3) Aadhaar number shall be required for Udyam Registration.
- 4) The Aadhaar number shall be of the proprietor in the case of a proprietorship firm, of the managing partner in the case of a partnership firm and of a karta in the case of a Hindu Undivided Family (HUF).
- 5) In case of a Company or a Limited Liability Partnership or a Co-operative Society or a Society or a Trust, the organisation or its authorised signatory shall provide its GSTIN and PAN along with its Aadhaar number.
- 6) In case an enterprise is duly registered as an Udyam with PAN, any deficiency of information for previous years when it did not have PAN shall be filled up on self-declaration basis.
- 7) No enterprise shall file more than one Udyam Registration: Provided that any number of activities including manufacturing or service or both may be specified or added in one Udyam Registration.

**Process of Udyam Registration:**

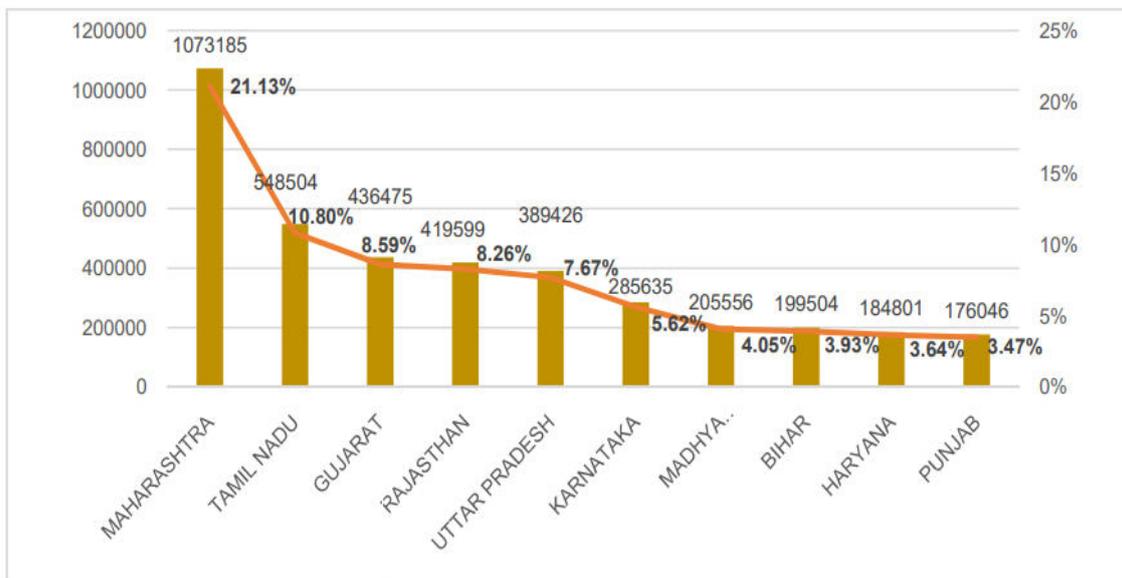


**MSME Registration Status:**



*Source:* Udaym Registration Bulletin – VII

As of 30/09/2021, there are 50,79,017 MSME's registered on the Udyam Registration Portal. Comprising of 47,73,266 Micro (93.80%), 2,74,009 Small (5.39%) and 31,742 Medium Enterprises (0.65%).



*Source:* Udaym Registration Bulletin – VII

Maharashtra has the highest numbers of registered MSMEs with a share of 21.1% followed by Tamil Nadu (10.8%), Gujarat (8.6%), Rajasthan (8.3%) and Uttar Pradesh (7.7%).

**Benefits for registered MSME in India:**

**1) Priority Lending:**

It may be extremely difficult for many business owners to secure a loan for starting a business without collateral security (any property or cash given as security). The Reserve Bank of India has directed banks to provide earmarked funds to MSME businesses mandated by its directions. The MSME certificate allows one to apply for this loan on a priority basis with less hassle.

**2) Interest Rate Exemption:**

MSME Registration entitles all banks to offer loans at lower interest rates than usual, and one may access this benefit from a number of banking institutions. Overdraft benefits are provided at a minimum of 1%. Loans are offered to businesses based on their GST returns' reported turnover.

**3) Stamp Duty and Income Tax Exemption:**

MSME registration can save good amount of money that may be assessable to tax in the absence of registration certificate. Stamp Duty and Registration and processing fee for the new industrial units as well as Direct Tax exemption in the initial years of establishment of the unit until profit generation.

**4) Subsidies:**

Barcode registration subsidy, ISO certification subsidy, Power tariff concessions, and credit Rating subsidy, NSIC Performance subsidy, IPS-Industrial Promotion subsidy are a few other MSME government benefits.

**5) Capital and Other Grants for Infrastructure Development:**

MSMEs are generating employment and giving entrepreneurial ventures a boost, the government also identifies training need for MSMEs and gives capital grants for improvisation of the infrastructure and support for entrepreneurial development.

**6) Technology and Quality Up-Gradation Support:**

In order to enhance the cost-effectiveness and promote clean energy use in manufacturing, the government reimburses project costs towards these goals for MSME sector units and also expenditure incurred for the implementation of clean technology, preparation of audit report and subsidies for licensing products according to national and international standards.

**7) Delayed Payment Protection:** The buyers from any registered MSME are required to clear the payments within a period of 15 days of receiving the goods or services, failing which compound interest is levied upon the monthly amounts agreed to be paid. This can be up to three times the rate notified by the RBI.

**8) Access to International Trade Fairs:**

The Government of India organizes several exchange programs, craft fairs, exhibitions, and trade-related events internationally. Being categorized as a micro, small or medium enterprise gives access to all of these platforms for international cooperation on trade-related aspects with different countries and fosters new business connections. The government also incentivizes the export of goods and services by MSMEs by way of subsidies, tax exemption, and technical support.

**9) Budgets:**

Maximum budgetary support in various areas such as participation in exhibitions, capacity building, modern packaging, the revival of traditional industries, creation of common facility centers, and many more.

**10) Upgradation:**

Assistance and support to traditional industry artisans to provide them sustainable employment through setting up infrastructure, raw materials, and skill development.

**11) E-Commerce Adoption:**

MSME Registration provides Improved marketing timeliness, a global client base, and adaptable business practices that can help earn profits as well as provides a platform for e-commerce adoption of business.

**Schemes Available for Registered MSME's:**

- 1) Prime Minister's Employment Generation Programme (PMEGP)
- 2) 2nd Loan for up-gradation of the existing PMEGP/MUDRA units
- 3) Credit Guarantee Scheme for Micro & Small Enterprises (CGTMSE)
- 4) Micro & Small Enterprises Cluster Development Programme (MSE-CDP) Scheme
- 5) Scheme of Fund for Regeneration of Traditional Industries (SFURTI)
- 6) Entrepreneurship Skill Development Programme (ESDP) Scheme
- 7) Assistance to Training Institutions (ATI) Scheme
- 8) Coir Vikas Yojana - Umbrella Scheme
- 9) Procurement and Marketing Support (PMS) scheme
- 10) International Co-operation (IC) Scheme
- 11) National SC-ST Hub Scheme
- 12) A Scheme for Promotion of Innovation, Rural Industries and Entrepreneurship (ASPIRE)
- 13) Khadi Gram Udyog Vikas Yojana - Umbrella Scheme
- 14) Tool Rooms and Technical Institutions
- 15) Credit Guarantee Scheme for Subordinate Debt (CGSSD) for Stressed MSMEs

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- 16) Self-Reliant India (SRI) Fund
  - 17) MSME Champions Scheme
  - ❖ MSME Sustainable (ZED) Certification
  - ❖ MSME-Competitive (Lean)
  - ❖ MSME- Innovative (Incubation, IPR, Design and Digital MSME)
  - ❖ Digital MSME

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**TESLA'S HELP IN INNOVATION AND SUSTAINABILITY****Shaurya Lunia**

Student, Podar World College, BA (Hons) Business Management Level 5

*Innovation is not just about creating and marketing new concepts. It's about coming up with innovative ways to do business and creating completely new market opportunities that meet unmet customer needs. As the internet and globalisation create a pool of new ideas, innovation is also about choosing and acting on the right ideas and bringing them to the market at the right time.*

*Tesla is a prime example because it has overhauled the electric car and added elevated electronics and software. Because of the damage that Internal Combustion Engines cause to the environment, the company is also focusing on implementing and pushing for solutions that use renewable energy, such as solar panels and power walls. To make their business even more effective, Tesla makes all of the parts for their cars themselves. Tesla has a much higher integration level than other factories, which outsource some of their production processes. So, Tesla is one of the few businesses in the world that receives the majority of its energy from renewable sources.*

**Innovation at Tesla:**

- I) **Software Orientation:** Tesla automobiles are computer-oriented. Over-the-Air Software Updates are sent to the car overnight by the company and add new features and fixes. All Tesla cars come with high-tech hardware that lets Autopilot get regular software updates. Compared to the old system, the computer onboard Tesla's Hardware 3 can handle 40 times more data. The company uses the computer's own neural network to design and train their autopilot. It gives a view of the world that goes far beyond what a driver can see because it can see in wavelengths that are too small for humans to detect.
- II) **Autopilot:** Autopilot makes it possible for a car to go faster, turn, and stop on its own. The technology allows users find the best way to get where you want to go by suggesting lane changes and other routes so you don't get stuck behind slow cars or trucks. With help from their onboard computer, The Hardware 3, and new sensors and cameras, Tesla can drive on roads that are narrower and more complicated. Smart Summon makes it much easier to get around and find a parking spot in places that aren't as easy to navigate.
- III) **FSD Tech:** Tesla's cars are ready for FSD (Full Self-Driving) technology, which means they can drive themselves over both short and long distances. If someone tells the car where they have to go, it will take them there on its own. When the driver gets out of the car at their destination, the car starts looking for a place to park itself. It looks for a place to park and then automatically parks itself. With one tap on the phone app, the car can be sent to where the owner is. The car can find nearby objects and people with the help of eight cameras and twelve ultrasonic sensors built into the car.

**Tesla's aiding in Global Sustainability Problems:****I) The Global Problem of Lack of Electricity Access :**

Even though the world is moving toward a renewable energy economy and cities are better at making clean energy than countries, most people still don't have access to clean, renewable energy. According to data from the United Nations, some people in the world do not have access to electricity. Clean cooking fuels like charcoal hurt the health and well-being of more than 3 billion people around the world and cause a lot of pollution inside homes.

Even though the number of people who have access to energy around the world went up by 7% in 2019, and 1.1 billion people got access for the first time, 759 million people still do not have access. Three-quarters of them are in the area south of the Sahara Desert. Since the COVID-19 pandemic devastated Africa, the number of people without power has gone up after going down for six years. People who used to be able to afford basic energy services can no longer do so because poverty is getting worse and the population is growing. Because 85 million people in Asia's developing countries may not be able to pay for an expanded service bundle, they may have to go back to basic energy access.

Most people who don't have much use dangerous fuels like charcoal and wood to cook, which puts them at risk for health problems like COVID-19. Only 66% of the world's population uses clean cooking technologies and fuels in 2019. This means that 2.6 billion people have been left behind and don't have access to clean energy

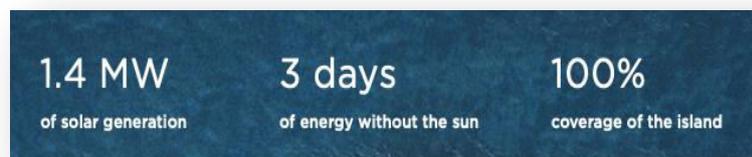
facilities. If nothing is done quickly, this will leave one-third of the world's population without clean cooking fuels and technologies by 2013. This will damage the environment and hurt people's health.

To lower greenhouse gas emissions, renewable energy needs to be used more and be more efficient. All countries should get enough money from the international community to help them use clean energy sources. But the least developed countries, like Nigeria, where most of the public money is still going, get only a small part of the international money for renewable energy. From 2010 to 2018, only 30% of all commitments went to these countries, while only 20% went to the other 46 least developed countries as a whole during the same time period. If you look at international aid per person, most countries, especially those in sub-Saharan Africa, get a lot less than the global average.

#### **Tesla's Contributions to the Resolution of this Worldwide Problem:**

Tesla has taken a big step toward making clean, cheap energy available to more people around the world. Thanks to micro-grids and power packs, the company has made it possible to get renewable energy in places where diesel and other fossil fuels are used. Tesla has put Power-packs in Puerto Rico, American Samoa, and Kauai. These are huge batteries that store electricity during the day and release it at night when demand is higher. Because of Tesla, we use 1.6 million gallons less fossil fuel each year. Plans are in place to lower the cost and reach of its renewable energy solutions around the world. This will make them easier to use.

Over a billion people in the world don't have access to electricity, and those who do use dirty sources like fossil fuels and coal. Diesel generators have been the main way that places like Ta'u island in American Samoa get electricity for decades. It puts people in those areas at risk of frequent blackouts when diesel supplies are low. To solve this problem, Tesla built a microgrid with more than 60 Power-pack systems and more than 5,300 solar panels that can power the whole island for three days even when the sun isn't out. Residents of Ta'u island no longer have to burn more than 111,000 gallons of diesel per year, pay a lot for rising fuel and transportation costs, and risk their health. Instead, they can take advantage of Tesla microgrids' affordable and reliable energy.



Infographic-

Tesla Powerpacks and its Impact, (Tesla, 2018)

#### **II) The Global Non-Renewable Resource Supply Crisis :**

The world is getting close to a crisis in the supply of non-renewable resources. They are scarce and can't be used in a way that will last. As of October 2021, countries like China are having a fuel crisis because there are problems with the supply chain across the country. China's factories are losing power because coal and natural gas are in short supply. A shortage has happened all over the country because people are using it in large amounts.

#### **Tesla's Contributions to the Resolution of this Worldwide Problem:**

So, Tesla has made a sustainable energy ecosystem to avoid these kinds of problems. The 52 MWh Powerpack units from Tesla have a 13 MW photovoltaic array and store and send solar energy to the grid during the day. This helps cut down on the amount of diesel power that is needed to meet energy needs. This method is also used on the island of Kaua'i, where it helped get 50% of the island's electricity from clean sources.

#### **III) Rise in GHG Emissions around the World:**

Every 50 years, the amount of Greenhouse Gas Emissions (GHG) in the world doubles, reaching a new high of over 35 gigatons per year. Without addressing how to make and use renewable energy, the world won't be able to cut down on CO<sub>2</sub> emissions. The world needs reliable, low-carbon, and cheap alternatives to fossil fuels that can be used on a large scale. As long as these alternatives aren't used, there will be two energy crises around the world. The most important thing to figure out about energy is how access to energy affects greenhouse gas emissions. But there is another big problem with energy around the world that has bad effects on both people and the environment: hundreds of millions of people don't have access to enough energy.

#### **What Tesla Did to Help Solve this World-Wide Problem:**

Tesla has always been focused on making a full transportation and energy ecosystem, which includes everything from solar power and storage to all-electric cars. Tesla knows it can't reach this goal on its own, so it has made its patents public and made them available to anyone who wants to design and make all-electric cars. Tesla has alternatives to fossil fuels like solar roofs, panels, the Powerwall, and other utilities that use renewable energy. These make the most renewable energy possible while having the least effect on the environment and giving homes electricity at the lowest cost per watt of any national provider.

With a Power-wall, which comes with every solar system, users can store energy at any time, even at night or when the power goes out. This is good for places like Sri Lanka and Hawaii, where islands often lose power and use fossil fuels like diesel or coal to make electricity. During the day, these powerpacks generate and store energy as a backup. If the grid goes down, the Tesla systems will detect it and turn it on right away, allowing appliances to keep working for days.

Tesla is building a whole system of energy and transportation from the ground up. Tesla is working on the technologies that will power this ecosystem, with a big focus on how much they will cost. Tesla plans to reach this goal through its research and development (R&D) and software development work, as well as by continuing to build up its advanced production capabilities.

#### **IV) Environmental Degradation and Pollution:**

As the need for clean and renewable energy sources grows, burning fossil fuels adds to pollution and damage to the environment. In addition to carbon dioxide, fossil fuels give off a lot of other things when they are burned. In the United States, 42% of dangerous mercury emissions and two-thirds of Sulphur dioxide emissions come from coal-fired power plants.

#### **What Tesla Did to Help Solve this World-Wide Problem:**

Tesla recycles all of its old batteries and has come up with a system called "cradle to cradle." Because of the way it is made, no raw materials are wasted during the manufacturing process. Every time Tesla recycles a battery, it cuts its carbon footprint by up to 17%, which is good for the environment.

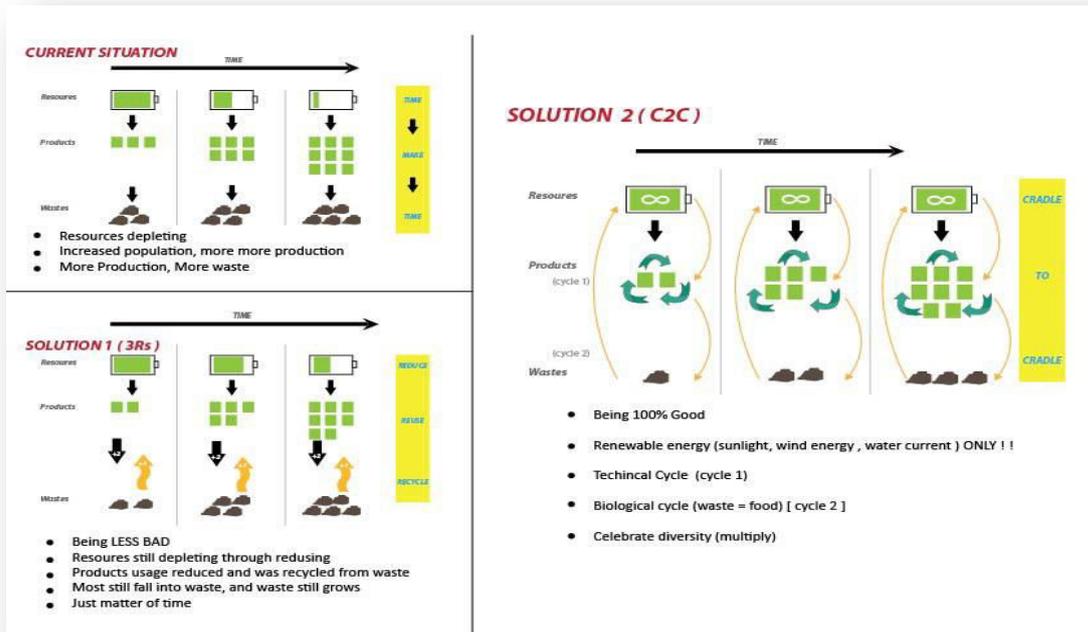
So, Tesla's work to move toward a future with 100% clean energy starts here. All of Tesla's cars run on electricity and don't make any pollution. Conventional cars with internal combustion engines (ICEs) usually run on fossil fuels like gasoline or diesel. Tesla EVs are powered by lithium-ion batteries that power one or more electric motors. This is the same type of battery that is in smartphones and laptop computers.

#### **V) There is a Problem with how to get Rid of Batteries from Electric Cars:**

The sad fact is that supplies and resources for people will never be available forever. At some point, the batteries will run out. When that happens, thousands of tonnes of electronic waste will be made all over the world. Nickel, cobalt, copper, and lithium are some of the things that can be used again. But putting these EV batteries in a landfill has serious effects on the environment. When lithium-ion batteries are recycled, damaged lithium batteries can give off toxic fumes that are bad for people's health and the environment.

What Tesla did to help solve this world-wide problem:

Cradle-to-cradle design (C2C) is a biomimetic approach to product and system design that views materials as nutrients circulating in healthy, safe metabolisms. The design of a product reveals its environmental impact. Given that each product or system is designed with the cradle-to-cradle principle in mind, waste is repurposed, just as it is in nature. Using nature as a model, goods and systems are designed to absorb and reuse old resources. This is also known as a closed-loop system because waste is not discarded.



**Solution 2:** Tesla's Gigafactory makes electric cars using regenerative design. After doing a lot of research on how to improve the manufacturing process and get back most of the active materials, Tesla made a manufacturing loop. When the cars are done and the customers are happy with them, the raw materials are recycled and used to make new cars. In Tesla's manufacturing process, every part is reused or recycled, so there is no waste. The recycling facility at Tesla's Gigafactory Nevada takes care of both the waste from making batteries and the batteries that are no longer useful. This keeps Tesla batteries from ending up in landfills. Because the company thinks there will be a lot more manufacturing waste around the world, it has put recycling systems in each location so that it can reuse valuable materials in its production process. With its new recycling process, Tesla can get back 92% of the materials that go into making its battery cells.

From Cradle to Cradle, the company makes sure that all of its battery materials are recycled back to their original raw materials, making a full circle of material flow. Metals are recycled to make battery cells, and any leftover polymers are used to make new parts for Tesla cars made of plastic.

**TECHNOLOGY, INNOVATION & RESILIENT ENTREPRENEURSHIP; CATALYSTS FOR SUSTAINED BUSINESS EXCELLENCE****Prof. Bhavana Singh<sup>a</sup> and Mr. Navel Nazareth<sup>b</sup>**<sup>a</sup>B.A. (M.M.C) Department, Co-ordinator, Prahladrai Dalmia Lions College, Malad (W), Mumbai<sup>a</sup>Student, Patkar Varda College, Goregaon (W), Mumbai**ABSTRACT**

*Being in the 21st century, after the introduction of 'Make in India' initiative, there is a new wave of entrepreneurs entering the market and post the COVID 19 pandemic, it was observed that our country has seen a sky-rocketing high when it comes to our today's youth choosing the path of entrepreneurship over employment, with keeping 'business ideas' and 'service quality' as their prime focus.*

*Due to the introduction of better technological gadgets and an opportunity to study professional specialised courses related to the area of interest, young individuals are able to set up their own business within less than 2 years of completing their graduation, After gathering sufficient work experience. It is observed that early exposure and an opportunity to learn specialised courses has helped them learn better strategy building and enabled these students to better pursue their dream of starting their own business. Through this research we aim to study how strategy and entrepreneurship have been an essential factor into being a catalyst for sustained business excellence.*

*Keywords: Entrepreneurship, Strategy, Youth, Business Excellence, Sustainable Business*

**CHAPTER ONE: INTRODUCTION**

When it comes to starting a business, while today's youth may lack in experience, they have certainly made a mark as entrepreneur in our market with their creative thinking, great problem solving capability and the ability to keep quality and commitment over any and every other factor when it comes to the business operations. In spite of there being no stability in the market due to our country just recovering through a pandemic, it is seen that young entrepreneurs are been able to strategize in a very practical manner in order to being able to sustain their business without there being a threat of complete loss in case of an factor occurring which is out of their control. Hence it is understood that when there is a proper strategy in place, the business is better prepared to tackle any circumstances if there may come any.

**CHAPTER TWO: LITERATURE REVIEW**

It is observed that when it comes to a business moving towards a track of sustainability, it has to ensure that they have to keep on introducing innovation and that is one of the major factors that has helped into ensuring that the business can stand the test of time and be able to deliver sustainable results. When businesses strategise keeping sustainability-oriented-innovation (SOI) in mind, there is a better result expected than otherwise. (Luqmani et al. 2)

When it comes to maintaining a sustainable business in the times of unstable economic environment, strategy plays an essential role into developing a right strike of balance. It is essential for brands to understand that strategy plays an essential role into ensuring that the business has sustainability and at the end of the day, they have to ensure that all resorts are taken keeping in consideration that all the decisions needs to be taken keeping in mind that all customers and stakeholders are taken care of. When it comes to business the element of innovation of the management and the commitments and efforts of human resource helps towards achieving sustainability. (Afthonidis and Tsiotras 2)

When it comes to sustainability in business development, sustainable entrepreneurship does play an essential role. With there being a multitude of operational and administrative needs, it can be seen how entrepreneurs can lead to focusing on productivity alone and hence a proper strategy can help in deriving businesses which are sustainable in nature with a good human resource set up in place. It also mentions that to avoid compromises in various dimensions of sustainable development, there needs to be a better study of interdependencies between sustainability goals and cooperation is essential. (Filser et al. 2)

As Sustainable Entrepreneurship (SE) is one of the factor that has garnered attention in today's time, it has been proven to be working into being a catalyst into sustainable business operations. While it has been seen to be evidently working in today's time, there needs to be better study conducted to understand if this is something which can sustain in the longer haul. With two approaches like bibliometric approach like co-citation analysis and bibliographic coupling of documents and manual coding of documents. (Anand et al. 2)

**CHAPTER THREE: RESEARCH DESIGN AND METHODOLOGY**

**OBJECTIVES**

1. To study the importance of strategy into building a sustainable business
2. To study how the entrepreneurs of today have been a catalyst into making businesses sustainable
3. To study factors encouraging young entrepreneur towards building a sustainable business model
4. To study the importance of introducing sustainable business model in India.

**HYPOTHESIS**

**H<sub>0</sub>** – Young entrepreneurs have been a catalyst into brining better strategic planning and sustaninability into businesses.

**H<sub>1</sub>** - Young entrepreneurs have not been a catalyst into brining better strategic planning and sustaninability into businesses.

**METHODOLOGY**

An Exploratory Research Design is used in this research where the usage of journal articles, newspapers, observations, etc. Qualitative method has been used so that can test the hypothesis in a detailed manner. Observation method was used for collecting secondary data. This method will enable to researcher to understand the people view point, their attitudes about the shift from traditional to the online medium.

Second hand data has been used in this research paper. The secondary data is used where the information is collected from various articles, journals, books, websites, etc. and proper references are given for the same.

**Sampling Technique**

Primary data was collected through survey as 10 questions were aksed on basis of the hypothesis and data was analysed based on the response taken from individuals ranging from the age of 21 to 45 who have either been an imperial part of business or have been entrepreneurs themselves.

**Limitations of the Study**

Due to the study being conducted in the suburbs of Mumbai, there is indeed a geographical gap thus leading to a conclusion which may be baised pertaining to this area of study alone hence this could lead to a totally different outcome if conducted in a different geographical location.

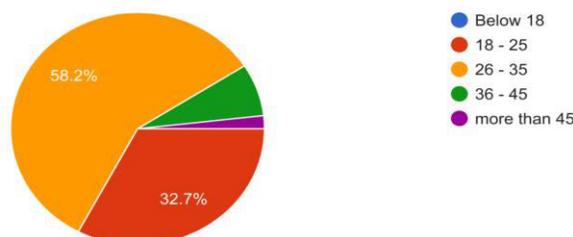
**CHAPTER 4: FINDINGS AND OBSERVATIONS**

We have used survey method to collate information from around 50 individuals who are majorly ranging from the age of 21 to 45 who have either been an imperial part of business operations or have been young entrepreneurs themselves. As sustainable entrepreneurship and strategy plays an essential role in sustainable business, we have shortlisted a set of 8 questions other than their age band to ensure that we were able to get a clear understanding based on the hypothesis selected for this subject.

**The Findings are as follows:**

**Age Band:**

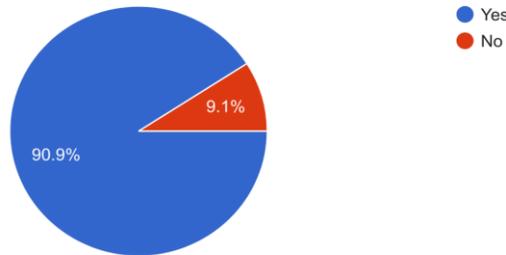
Age Band  
55 responses



According to the data collated from the survey into a pie diagram, it can be clearly seen that there were atleast 55 particinats who were in the age band of 19 - 45 years of age and to ensure the legitimacy, each set of participants were send the survey link individually. We were able to get 54 individuals who are relevant to our survey

**Is Sustainability Important all Kinds of Business:**

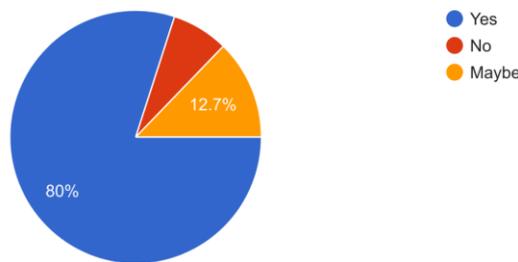
Is sustainability important all kinds of business?  
55 responses



To understand whether the participants understand the concept of sustainability, the first question asked in this survey was ‘Is sustainability important in all kinds of businesses’ and it was seen that 50 people out of 55 believe that sustainability was important.

**Do You Think that Strategy Plays an Important Role into Building a Sustainable Business:**

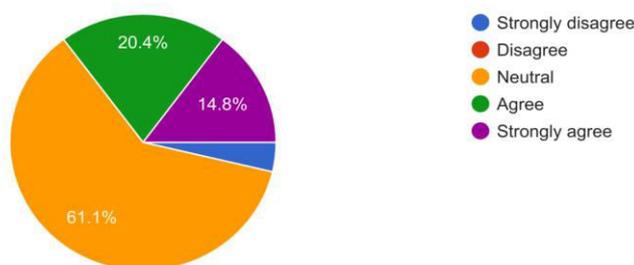
Do you think that strategy plays an important role into building a sustainable business  
55 responses



As our literature review suggests that strategy building is one of the most important aspect into building a sustainable busines, we were able to observe that out of 55 people who participated in the survey, 44 number of people agreed that the statement, 4 people disagreed with the survey and 7 decided to neither conform nor deny the statement.

**Are Professional Courses Taught in College Help in Building a Better Business Strategy:**

Are professional courses taught in college help in building a better business strategy  
54 responses

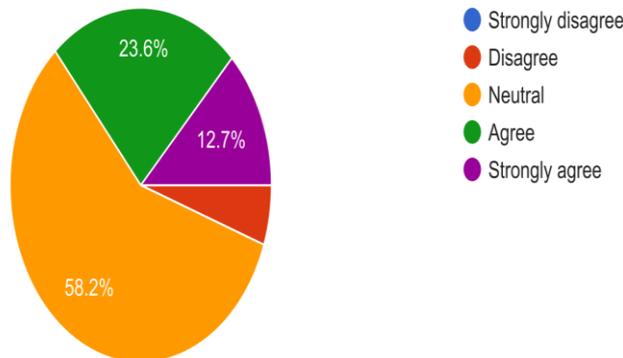


As it was advised in the abstract that one of the majour factors why the young generation has been able to enter the arena of Entrepreneurship, when asked about ‘Are professional courses taught in college help in building a better business strategy’, it was observed that 2 people strongly disagree, 33 were neutral about the statement, 11 Agree with the statement & 8 Strongly Agree giving us a clear idea that according to majority of 96.3 percent, education does play an important role while 1 chose not to answer.

**Young individuals passionate in starting their business are able to set up their own business within less than 2 years of completing their graduation:**

Young individuals passionate in starting their business are able to set up their own business within less than 2 years of completing their graduation

55 responses

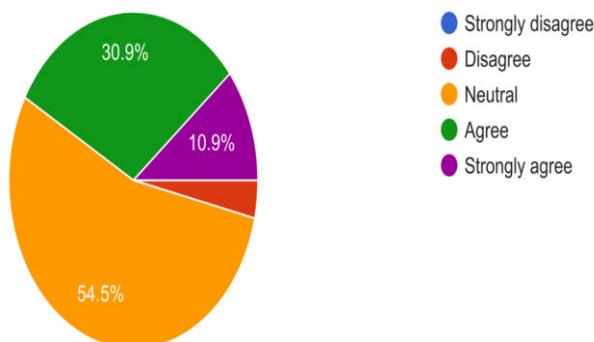


As it was advised in the abstract that one of the major factors why the young generation has been able to enter the arena of Entrepreneurship within few years of work experience, when asked about ‘Young individuals passionate in starting their business are able to set up their own business within less than 2 years of completing their graduation’, it was observed that 3 people disagree, 32 were neutral about the statement, 13 Agree with the statement & 7 Strongly Agree with this statement.

**Human Resource Plays an Essential Role in Building Strategy Towards Building Sustainable Businesses:**

Human resource plays an essential role in building strategy towards building sustainable businesses

55 responses

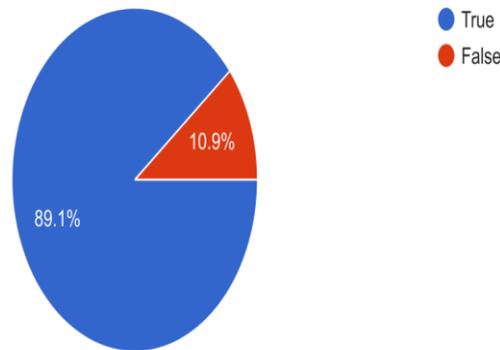


As it was observed during literature review, it was known that human resource does play an important role in the operations of a business. When asked about ‘Human resource plays an essential role in building strategy towards building sustainable businesses’, it was observed that 2 people disagree, 30 were neutral about the statement, 17 Agree with the statement & 6 Strongly Agree.

**Strategic planning of business operations can lead to there being no dissaray even during the times of unstable economic standing of our country:**

Strategic planning of business operations can lead to there being no dissaray even during the times of unstable economic standing of our country

55 responses

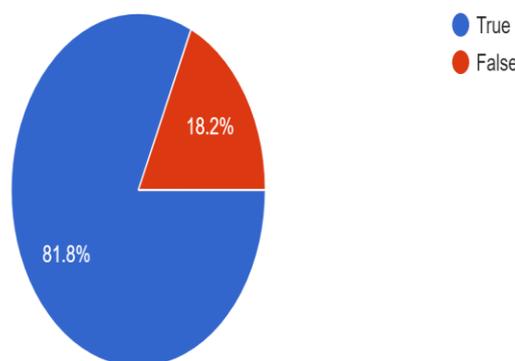


As economic instability is something that is seen as a constant in todats time, literate review suggested strategic planning is very important in ensuring that the customers and stakeholders get the appropriate response. It was seen that out of 55 responses, around 89.1 percent individuals agree and 10.9 percent of people do not agree with the statement.

**The young entrepreneurs of today are being a catalyst into making businesses sustainable and profitable at the same time:**

The young entrepreneurs of today are being a catalyst into making businesses sustainable and profitable at the same time

55 responses



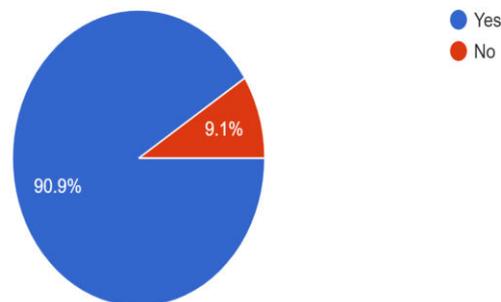
As many survey personelles where entrepreneurs themselves, when we asked them about their opinion on ‘The young entrepreneurs of today are being a catalyst into making businesses sustainable and profitable at the same time’, it was seen that around 81.8 percent individuals agree and 18.2 percent of people do not agree with the statement.

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**According to you, has strategy and entrepreneurship have been an essential factor into being a catalyst for sustained business excellence:**

According to you, has strategy and entrepreneurship have been an essential factor into being a catalyst for sustained business excellence

55 responses



Being entrepreneurs themselves, when asked whether According to them, has strategy and entrepreneurship have been an essential factor into being a catalyst for sustained business excellence. 90.9 percent people agreed while 9.1 percent people disagreed.

**CONCLUSION**

While sustainable business is one aspect which all startups aim to achieve, a proper strategy and an entrepreneur with vision plays an imperative role into achieving the goal. It can be classified that the approach of both literature review and survey helps us put many things in perspective like while there are proficient amount of studies conducted on this subject matter, but very few entrepreneurs have a clear idea when it comes to the subject matter in hand which is a 'Sustainable Business'. Looking at the collation of the data and literature we found on the subject, it can be easily said that there has our hypothesis 'Young entrepreneurs have been a catalyst into brining better strategic planning and sustanability into businesses' stands proven.

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**ROLES AND CHALLENGES OF WOMEN ENTREPRENEURSHIP IN INDIA****Srijoni Banerjee<sup>1</sup> and Aditi Singh<sup>2</sup>**<sup>1</sup>Senior Associate Lead Network Development EMEA, Gerson Lehrman Group, Ireland<sup>2</sup>Learner, M.Com. (E-Com), Thakur College of Science & Commerce**ABSTRACT**

*Indian women are proving themselves everywhere. They are becoming successful owner of established business. They are giving tough competition to the corporate and becoming the name to reckon with in the financial and business world. Every nation in current era has women entrepreneurs who are making their nation proud. More the number of women entrepreneurs, better is the financial and economic status of a nation. In India 14% of women run small businesses. The journey of Indian women from being in the confine of the house to stepping out and doing something on their own is mesmerizing. Their desire to lead, bring a change, gain recognition, respect, social status, their vision, to be financially independent is the main motivation behind women startup. Women entrepreneurs are those who aim for a goal, achieve it, look after each aspect of business from production to completion of finished goods and make it available in the market for the customers.*

*Keywords:*

**INTRODUCTION**

Women comprises one half of the population and have a huge prospect of influencing the economy if given fair opportunity. In the conventional society, they were confined to the four walls looking after their family. However, even in the contemporary society, their entrepreneurial zeal was noticed. Most of the ladies entrepreneur started business which were extension of their kitchen activities. In fact, whatever they prepared at home they use to make commercially available in the market. That is why most of the cottage industry is full of pickles, papad and masalas. Few of them ventured into services relating to hospitality, catering, educational offerings, consultation or beauty parlours and clinics. Women entrepreneurs are those who aim for their goal and achieve it. They come up with an idea, arrange for resources, start the business and look after each aspect of their business from production to completion of finished goods and making it available in the market.

In India there are about 13.5 to 15.7 million women-owned enterprises. Although this number is huge, it only represents 20% of all enterprises.

In past few years women-owned enterprises are increasing. Over the past few decade, women-owned enterprises increased from 14 to 20%, as per government sources. And over the last decade this number has increased exponentially due to schemes and other initiatives offered by national and state governments, investors, banks, financial and educational institutions to financially support women entrepreneur

However, women entrepreneurs have long way to go as there are still lot of challenges that women entrepreneur encounters. Most significant challenges are as follows:

(1) Lack of Financial Support- Women Entrepreneurs lack financial support as not many investors trust them and shy away from investing capital in their business. There is a common assumption that women held business will not be successful.

**(2) Gender Perspectives**

Failure rates of women entrepreneurs are more than male entrepreneurs. Hence, banks are skeptical about issuing loans to businesswomen as they don't find them reliable. Whereas men are granted loan very easily. Some differences are also observed between male controlled and female controlled business in terms of management styles, skills, business objectives, business characteristics and business scalability.

(3) Family Issues- Women have greater problems in running their enterprises as they have to multitask. They have the dual responsibility of running their home as well as that of managing business.

(4) Lack of Confidence and Fear of Failure-

In India women suffer from low confidence. Fear of failure is also high as they get very protected upbringing and are not encouraged to undertake something as risky as business as career.

Since women entrepreneurship cannot be ignored, in order to facilitate the growth of women entrepreneurship in India the state and the central government has come up with many schemes to motivate women entrepreneurs which can help in eradicating poverty, unemployment and financial crisis.

There are several schemes launched by the government to motivate women entrepreneurs and change their role from a housewife to a businesswoman. For example SBI-stree shakti package, Mahila udyam scheme, SIDBI assistance to promote female entrepreneurship Self-Employment Program for Urban Poor (SEPUP), Integrated Rural Development Program (IRDP), Micro-Finance through Rashtriya Mahila Kosh (RMK).

It is observed, of late women are breaking shackles and venturing into businesses which are traditionally not associated with them. In today`s time women have started to go out of their way to set up big business houses and becoming millionaires. They have proved themselves by hard work, dedication and determination. Today, there are huge number of women engaged in SMEs such as

Agriculture -Horticulture, tea plantation.

Beauty Parlour,

Cosmetic brand

Skincare brand

Clothing line

Pharmaceuticals

Educational fields

Social work

There are few functions expected from women entrepreneur. They are:

1. Exploring the prospects of starting new enterprises,
2. Undertaking of risks and the handling of economic uncertainties involved in business,
3. Introduction of innovations or initiation of innovations.
4. Co-ordination, administration and control, and
5. Supervision and providing leadership in all business aspects.

### **REVIEW OF LITERATURE**

- 1) (Aggarwal, Sept 20-22 2018) Dr Aggarwal has very positive view as far as women entrepreneurship is concerned. She has claimed in her paper that women have crossed glass ceiling in every sphere of business and their contribution in Indian economy is quite visible. However, she also admitted that women are disadvantaged because of their gender and has to constantly fight challenges and obstacles coming their way. She particularly mentioned about lack of finance as one of the challenges in women entrepreneurship.
- 2) (Bhatnagar\*, Bhardwaj, & Gandhi, June 2012) in this paper, researchers attempted to find what problems hinder women entrepreneurs – in creation and maintenance of their own enterprise. The focus of the paper was to find problem they face in starting an enterprise and the problem faced by them in day to day running of a business. Their study concluded that nonavailability of long-term finance, regular and frequent need of working capital, poor location of shop and lack of transport facility along with lack of raw material are some of the problems faced by women entrepreneur in India. They also identified the reason for Indian women not going international and cited limited international business experience, inadequate business education, and lack of access to international networks as reasons.
- 3) (Mahajan, 2013) recommended in her paper that traditional mindset of the people is the main reason for slow growth of women entrepreneurship. According to her, it is imperative to design programmes that will address attitudinal changes, training and focus on growth of supportive services. She feels personality development among women can build self efficacy and drive them towards women entrepreneurship.
- 4) (Bisaria & Wajih, May; 2014) also have the same finding like above mentioned paper and highlighted lack of confidence in women as another impediment for women entrepreneurship. His research identified factors like low risk taking attitude, lack of knowledge and information, dual duties as main impediment for women entrepreneurship.
- 5) (KORRECK, SEPT 25, 2019) in her report attempted to find what is holding Indian women entrepreneur behind. Her study confirms the points identified by above researcher. She recommends safer work environment and more family and government support to encourage women to become entrepreneur.

**OBJECTIVE OF THE STUDY**

- To study the factors responsible for encouraging women to take up entrepreneurship activities.
- To critically evaluate various problems faced by women entrepreneurs.
- To explore financial aid available to women entrepreneur.

**RESEARCH METHODOLOGY**

It is descriptive research which attempted to understand women entrepreneurship and their challenges in India.

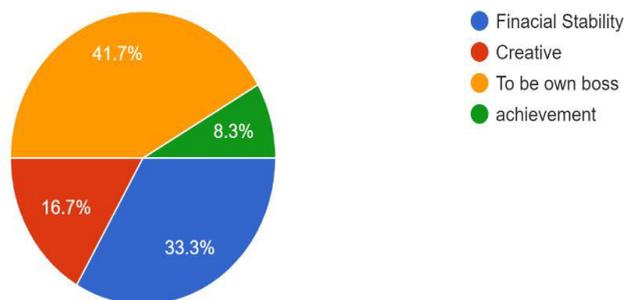
The data for this research project is collected through questionnaire. A structured questionnaire is framed as it is less time consuming, generates specific and to the point information, easier to tabulate and interpret. Moreover, respondents prefer to give direct answers. Primary data are collected through questionnaire. Secondary data was collected from internal sources like articles in journals, newspaper articles.

In a convenience sampling method, data was collected from 68 respondent residing in suburban Mumbai. Though the form was circulated among 100 respondents, due to constraint of time the research progressed with 68 responses.

**Data Analysis and Interpretation**

**1. Reasons for Women Entrepreneurship**

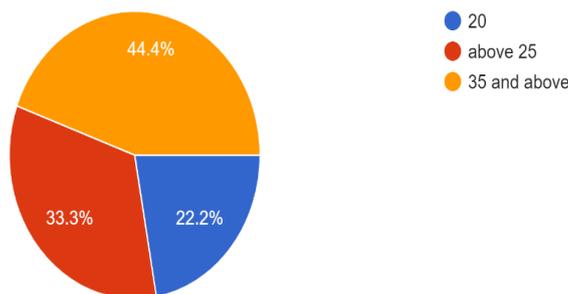
1.Reasons of Women Entrepreneurship  
12 responses



This chart depicts that maximum respondent (41.7%) have opted for entrepreneurship to be able to be their own boss. Few wanted (33.3%) financial stability and 16.7% are motivated to give shape to their creativity. Only 8.3% respondent said that they are influenced by Achievement orientation. Thus, it is clear that main motivation behind women entrepreneurship is the ability to become one’s own boss.

**2. Age Group of Women Entrepreneurs**

2.What is the highest age group of women Entrepreneur  
9 responses

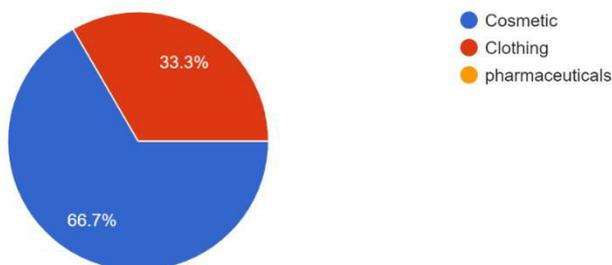


The analysis from this graph helps us to understand that the majority of women engaged in self - made business are from the age group of 35 and above. Women in the age group of 25 and above also shows interest in

entrepreneurship. But girls in the age group of 20 to 25 are not found much in entrepreneurship. Maybe that is the period when they focus on learning and on gaining experience.0

**3. Most Appealing Business for Women Entrepreneurs**

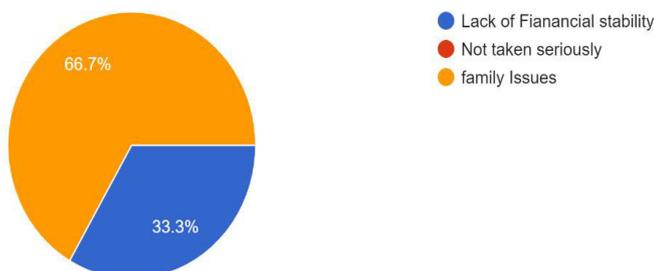
3. Most business engaged by Women  
9 responses



The chart depicts that 66.7% of the respondents were engaged in beauty business either owning beauty parlor or cosmetics or selling artificial jewelry. 33.3% of the respondents were found to be engaged in clothing business. Hardly any were found in pharmaceutical sector.

**4. Challenges Faced by Women Entrepreneur**

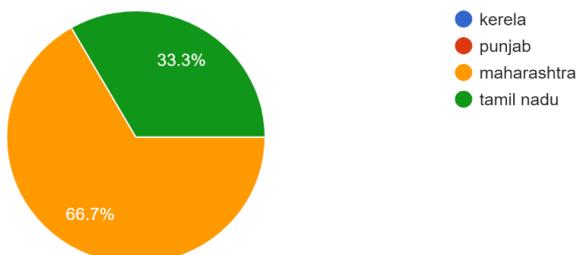
4. Challenges faced by Women Entrepreneurs  
9 responses



Numbers of women entrepreneurs in our country is not much and it is mostly because of challenges faced by them. When asked most of the respondent said that family resistance and non-acceptance by family members are the main reason for such a smaller number of women choosing to be entrepreneurs. Lack of financial stability and ignorance about loan facility and other facilities given to women entrepreneurs is another reason for such a smaller number of women entrepreneurs.

**5. State Having Highest Number of Women Entrepreneurs**

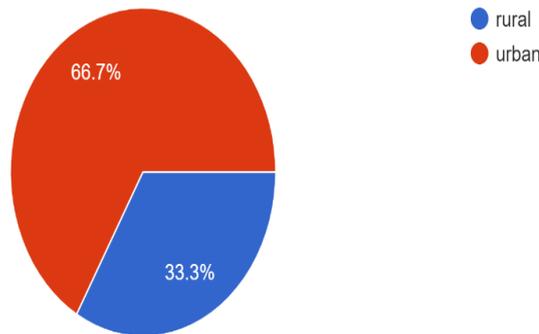
State having Highest no of women enterpreneurs in india  
3 responses



The sample was selected from Mumbai region hence most of the respondent (66.7%) were from Maharashtra. In this survey other prominent state to have women entrepreneurs is Tamil Nadu. Almost 33.3% belongs to that state.

**6. Prevalence of Women Entrepreneur**

Most Women entrepreneur are found in which are Area  
3 responses



This study revealed that maximum entrepreneurs ( 66.7%) belonged to urban area compared to only 33.3% who belonged to rural area.

From secondary data following information has been collected.

**Status of women Entrepreneurs in India-**

Name of states	No. of units registered	No. of women entrepreneur	Percentage
Tamil nadu	9618	2930	30.36
Uttar Pradesh	7,980	3180	39.84
Maharashtra	4,339	1394	32.12
gujarat	3872	1538	39.72
kerela	5487	2135	38.91
punjab	4791	1618	33.77
Madhya pradesh	2967	842	28.71

**Percentage distribution of enterprise by gender of Owner in Rural and Urban areas-**

Area	Female	Male
Rural	15.27	84.73
Urban	12.45	87.55
All	13.72	86.28

**Women Work Participation in Global Scenario**

Sr. no	country	Percentage
1	India	31.6
2	USA	45
3	UK	43
4	INDONESIA	40
5	Sri lanka	45
6	Brazil	35

Womens Engaged in business according to various categories-

**1. FIRST CATEGORY-**

- ✓ Established in large cities.

- ✓ Having higher level technical and professional qualifications
- ✓ Nontraditional items
- ✓ Sound financial positions

**2. Second Category-**

- ✓ Established in cities and towns
- ✓ Having enough education.
- ✓ Both traditional and non traditional item
- ✓ Undertaking women services like -kindergarden, beauty parlour.

**3. Third Category-**

- ✓ Illiterate women
- ✓ Financially weak
- ✓ Involved in family business-agriculture ,horticulture, handloom,

**OVERVIEW****Conclusion-**

Today we are in a better position where women participation in the field of entrepreneurship is concerned. Lots of effort is also taken at global level to enhance women participation in entrepreneurship. This is mainly because of attitude change, change in conservative mindset, daring and risk-taking abilities of women, support and cooperation of families and societies changes and relaxation in govt. policies, granting various upliftment schemes to women entrepreneurs. Women entrepreneurship is both about women's position in the society and about role of entrepreneurship in the same society.

Women entrepreneurs face many obstacles, specifically in marketing their product including family responsibilities that need to overcome in order to give them access to the same opportunities as men. Lack of awareness among women about the financial assistance offered to them, incentives, loans, and schemes by the nationalized financial institutions is one of the major challenges. Hence, in spite of financial policies and programs for women entrepreneurs, financial support has reached to only few women entrepreneurs. Achievement motivation is found to be scarce among women due to Indian socialization pattern and socio-cultural factors which are gender biased. Their domestic role is widely accepted and assumed. Support and approval of husband seems to be a necessary condition for women's entry into business. Lack of such family approval make for a considerable hinderance for women. .A women's entry into business is halted when family members are not in favor of their ladies entering into entrepreneurship.

**BIBLIOGRAPHY/REFERENCE-**

1. Newspapers
2. Journals
3. Articles
4. Periodicals
5. Surbey Report
6. Websites

**INCLUSIVE LANGUAGE AND ITS IMPACT ON SELF-DISCOVERY AND SELF-ACCEPTANCE****Priyanka Shukla**

Learner, Thakur College of Science &amp; Commerce, Mumbai

**ABSTRACT**

*Inclusive Language is defined as “language that avoids use of certain expressions or words that might be considered to exclude particular groups of people.” Inclusive Language acknowledges diversity, conveys respect to all people and is sensitive to differences and promotes equitable opportunity. Despite knowing the importance of Inclusive language we are barely aware of whether inclusive language impacts self-discovery and self-acceptance. Through a quantitative based survey methodology, this paper seeks to explore the impact that inclusive language on self-discovery and self-acceptance. And would the use of inclusive language in mirror stage in which the formation of self-image and self-discovery starts, as classified and explained by Jacques Lacan, make it easier for people to accept themselves. Through this research, I have tried to establish a connection between the problems faced while discovering one self and the possibility of changing set patterns of language to inclusive language to aid in the journey. Overall, this study aims at reviewing the direct implications inclusive language has on one’s self-discovery and self-acceptance.*

**Rational and Gap Analysis**

It can be claimed that language has a huge impact on self-discovery and self-acceptance. This research talks about where inclusive language has any impact on self-discovery and self-acceptance and can the use of the inclusive language break the set discriminatory practices and creating new more inclusive language.

Inclusive language can be inferred as the language that avoids use of certain expressions or words that might be considered to exclude particular groups of people, acknowledges diversity, conveys respect and is sensitive to differences.

**For Example** - person has intellectual disabilities, rather than is “suffering from,” is “afflicted with,” or is “a victim of” intellectual disabilities.

There have been several studies conducted on Inclusive language and its use, but there has been no research done on the impact of inclusive language on one’s self-discovery and acceptance, how the use of inclusive language can create a more inclusive journey of self-acceptance and how its use it to acknowledge and be sensitive to the differences, as “Ethical communication use inclusive language and avoid harmful language not because we fear to offend others but because we recognise and celebrate inherent worth of every person and we want to speak and write in a way that acknowledges the humanity of the others.”

**OBJECTIVES**

- To determine if Inclusive language has any impact on self-discovery and acceptance
- To find out if use of Inclusive language can ease the journey of one’s self discovery

**RESEARCH DESIGN AND METHODOLOGY**

This research aims to find if Inclusive language has an impact on self-discovery and self-acceptance and if the use of inclusive language can ease the journey of one’s self discovery and acceptance. The research also focuses on if use of inclusive language can help create new set practices that are more inclusive.

“As once certain categories are constructed within the language, we proceed to organize the world according to those categories. We even fail to see evidence which is not consistent within those categories ... New names systematically subscribe to old beliefs, they are locked into principles that already exist, and there seems no way out of this even if those principles are inadequate or false”

This paper has used a quantitative method of analysis conducted through a survey. All the participants from the age of 18 to 25 using the non-probability sampling method.

Questions within the survey and the data received-

Gender – Non-binary (2.5%), Genderfluid (14.6%), Transgender (18.3%), Agender (14.6%), Male (24.2%), Female (25.8%)

Body Image issues -Yes 89.6%

Felt inferior because of the gender Identity- Yes 82.1%

Felt bad for being different- Yes 76.6

Wanted to Change something because it was out of the norm- Yes 75.8%

Describe your journey- Not there yet 6.7%, Smooth 5%, Rocky 88.3%

Was it easy to accept yourself- No 80%

Are you aware about Inclusive Language- No 82.9%

Did you grow up around Inclusive Language- No 87.5%

Would it be easy to accept yourself if you grew up around Inclusive language- Yes 80.1%

**Analysis**

For the survey, the questions asked were regarding the participants journey to self-discovery, awareness regarding Inclusive language and if they would have had an easier time accepting themselves if they did. 88% of the participants described their journey as troubled and rocky. 82% were not aware of what inclusive language meant where as 87% said that they didn't grew up with Inclusive language. Majority of the people (80%) felt like they would have had an easier time accepting themselves if they did grew around inclusive language

**Expected Outcomes**

The expected outcome of the work is to pave an easier path of one’s self-discovery and an easier acceptance of one’s identity. Leading to fewer identity crises and the ability to change the old set patterns and create new more inclusive ones. Also creating awareness of the use and impact of inclusive language.

**Benefits to the Society –**

Inclusive language will help people discover and accept themselves easily.

- It would help create a safer environment for all communities.
- It would help create a space where everyone feels seen, heard and valued.
- It would help destigmatize communities and societies
- It would help breaks the stereotypes
- It would help normalize and inclusion of different identities (gender, sexual, religious, etc.)

**Future Scope**

India has one of the youngest populations globally with more than 40 percent of the population ranging from 13 to 35 (defined as youth in the National Youth Policy), the need of external support during the journey of self-discovery and self-acceptance is rapidly increasing. The research may help in incorporation of Inclusive language, which will be able to provide that extra support in the journey and help people be more comfortable with their identities. And also help in creating new guidelines and practices which positively impact self-discovery and self-acceptance of oneself.

**SWOC Analysis –**

<b>Strengths</b>	<b>Weakness</b>	<b>Opportunities</b>	<b>Challenges</b>
Creates an inclusive environment where everyone feels heard, seen and valued	Stereotypes are deeply rooted in our society and language making it very difficult to erase them and create a change in the set practices.	Creating proper guidelines and concepts directly related to self-acceptance	It is subjective, as one person cannot represent a whole community
Breaks stereotypes and normalizes different identities, communities and societies	Several concepts don't really have a proper definition and names making it harder to create awareness	The amount of responses to the survey clearly shows that people are definitely interested in the topic but don't really have proper knowledge about the topic or are completely aware of the concepts	New identities are being created frequently making it a challenge to be sensitive to all of them

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**A STUDY ON CONSUMER SAVINGS ON ELECTRONIC VEHICLES IN BANGALORE URBAN****Rakshitha M and Chaitanya P Krishnan**

PG Department of Commerce, Mount Carmel College (Autonomous)

**ABSTRACT**

*The more than a century-old vehicle industry is about to undergo a transformation. In addition to lowering greenhouse gas emissions, promoting sustainable economic growth, enhancing air quality, and reducing the importation of fossil fuels, electric vehicles (EVs) are seen as a potential solution to a number of issues. The study examines consumer cost-saving tactics that affect customer perceptions of electric vehicles and the decision to purchase one, to comprehend the numerous government initiatives that the Indian government has undertaken. The study focuses on consumer perception towards EV and various cost saving using Electric Vehicle. The study used primary data. Percentage analysis was used to analyze the data that is gathered and descriptive analysis to calculate mean and SD, ANOVA and linear regression is used.*

*Keywords: Electric Vehicle, Consumer perception, Cost saving, Government Subsidies, Infrastructure, Cost friendly.*

**1. INTRODUCTION**

A revolution is coming to the more than a century-old automobile industry. Electric vehicles (EVs) are viewed as a solution to a variety of problems, including reducing greenhouse gas emissions, fostering sustainable economic growth, improving air quality, and reducing the importation of fossil fuels. The demand for electric automobiles in India is rising. Incentives and programs have been launched by the federal and state governments to promote the usage of electric vehicles, and there are also regulations and standards in place.

A consumer is a person or group that plans to purchase something, actually does so, or utilizes it for primarily social, family, domestic, or other non-business or entrepreneurial activity-related objectives.

An asset that is an important criterion for evaluating the status of the consumer economy can be used to estimate consumer savings.

The concept of electric cars has been around for a while, but in the past ten years, it has gained a lot of attention due to the expanding carbon footprint and other environmental implications of fuel-powered cars. In contrast to an internal combustion engine, which generates power by burning a mixture of fuel and gases, an electric vehicle (EV) is propelled by an electric motor. When electricity was one of the favored sources of motor vehicle power in the late 19th century, electric vehicles (EVs) first made their appearance, providing a degree of comfort and usability that gasoline cars of the day were unable to equal.

These vehicles use less fuel, produce fewer greenhouse gases (GHG), and are quieter. India is working harder to lower pollution levels and its carbon footprint. The term "technology" refers to a vehicle's technological components. The effectiveness and efficiency of these programs are expected to enhance with a better understanding of client preferences for EV.

As evidenced by recent efforts to modify the Faster Adoption and Manufacturing of Hybrid and Electric Vehicles in India (FAME) II scheme to reduce the price of electric two-wheelers, the federal government is giving the transition to clean transportation high priority.

One of the biggest everyday savings is the cost of petrol. Along with cost reductions, electricity rates are far more stable than gasoline costs. An electric vehicle costs less fuel since energy prices are predictable. Even some utilities offer rebates for off-peak vehicle charging. Depending on the state and electricity provider, programs may include discounted per kilowatt-hour rates for charging electric vehicles, discounted rates for charging electric vehicles during off-peak hours, and reduced time-of-use (TOU) fees. All of these options result in using less expensive electricity to recharge your electric car.

**2. LITERATURE REVIEW**

**Aakarsh ram (2020)** An assessment of customer opinions and purchasing trends in response to the release of an electric vehicle on the market, as well as a quick glance at how Indians feel about having an electric automobile. The survey claims that consumers are more concerned with a product's dependability, perception, and buying habits. Consumer decision-making when purchasing EVs is influenced by more than just maximizing the design and development of electric vehicles.

**Mr. Omkar tupe, Prof. Shweta Kishore, Dr. Arlophjohnvieira (2020)**, Due to the ongoing depletion of fossil resources and their rising cost, alternative energy sources are needed to power cars. The car is viewed as an electronic vehicle in India that has the potential to enhance both the economy and the environment. Nevertheless, EV market penetration is now quite low despite the government's implementation of policies. This essay analyses customer behavior and looks at the potential market for electronic vehicles in India.

**Ms. Mifzala Ansar, Ms. Monika B. A(2019)**, In order to reduce their exposure to pollutants and potentially fatal gases, residents of major cities must recognize that metropolitan areas emit a significant quantity of pollution. The thoughts, sentiments, and impressions expressed in this article are all related to the awareness of the inclination to buy cars in order to maintain the environmental sustainability. Additionally, the study investigates consumer awareness of the Indian government's plans for e-transportation.

**Dr. Anupama k Malagi, Ramaya S (2022)**, Alternative energy sources are required to power cars in the contemporary climate since non-renewable energy sources, in particular fossil fuels, are depleting quickly and becoming more expensive. One of the most crucial issues is environmental sustainability because it determines how long the earth will last. One of the main sources of carbon emissions is the transportation industry. Electronic vehicles are currently being considered by the automotive industry as a solution to this growing issue. Understanding and assessing people's levels of knowledge and viewpoints on electronic cars is vital in this regard.

**Pretty Bhalla, Inass Salamah Ali, Afroze Nazneen (2018)**This paper focuses on studying various factors that influence the purchase decision and perception towards the purchase of electric vehicles by consumers in India. The sample size used for the study was 233 out of which 73% was male, 27% was female. The study analyzed the data on the basis of environmental concerns, low-cost vehicle, comfort, trust, technology, infrastructure, Social Acceptance. This study found that Environmental concern was the main aspect that influence the purchase of electric vehicle followed by technology and cost.

**Ankita Nagpal (2020)**, This paper looks into the key factors that affect the consumers their purchasing intentions, actual purchasing behavior with respect to Electric vehicles and its impact on oil and gas consumption with respect to India. The study found that the adoption of Electric vehicles impacts the oils and gas sector, the adoption of EV will be seen for light motor vehicles which is used to cover shorter distance because of frequent charging.

**Ajaysinh Parmar, Prof. Tushar Pradhan (2021)**, This study analyses the perception of consumers towards electronic vehicle in Vadodara city. The study has used descriptive research design, the data is collected through questionnaire. The statistical tool used is Chi-square test to analyze the data. The major focus of the study is conducted in Vadodara city for the consumers with in the age group of 18 to 55.This research concluded that people in Vadodara are ready to move into electric vehicle it is also seen that only men and working women have complete knowledge of electric vehicle and the subsidies provided by the government. The major consideration to purchase electronic vehicle is the concern towards raising environment issues and depletion of fossil.

**Sajan Acharya (2019)**, This study analyses the consumer perception towards electric vehicle with special focus to the role of electric vehicles in environment sustainability. The study found that income level of people also played a major role in the choice of purchase the population earning above 5 lakhs were ready to buy electric vehicles compared to the population below the income line. The limited choice of electric vehicle is one of the limiting factors for not preferring electric vehicle, mileage is also an important factor to be considered.

**3. RESEARCH METHODOLOGY**

**3.1 Research Design:**

The study focuses on Bangalore urban residents who use Electric Vehicles and how they view EVs. A systematic questionnaire was used to obtain data from the 101-sample size. Both primary and secondary sources of information are employed. A convenient random sampling technique is used. The analysis of many publications and journals yields secondary data. Descriptive analysis to calculate mean and SD, ANOVA and linear regression is used.

**3.2 Research Variables**

**Table 3.1: Variables**

<b>Dependent variables</b>	<b>Independent variables</b>
Consumer perception	Charging stations

	Choice in the purchase of EV
	Price preference
	Less carbon emission
	Long distance travel
Cost saving	Volatile Fuel price
	Cost-benefit
	Lower maintenance cost
	Cost friendly
Government subsidies	Road tax
	Discount offered
	Registration cost

**3.3 Objectives of the Study**

- To analyze the factors influencing consumer perception towards EV.
- To explore the consumer cost saving strategies which influence in buying EV.
- To understand various government subsidies initiated by Government of India.

**3.4 Operational Definition**

**Consumer Perception** – The attitude of consumers towards EV

**Cost Saving** –Savings of the consumers with regards to the use of EV.

**Government Subsidies** – Benefits given by Government towards any action performed to manufacture or influence purchasing behavior among consumers.

**4. DATA ANALYSIS**

**4.1 Demographic Profile of the Respondents**

**Table 4.1: DEMOGRAPHIC ANALYSIS**

		Frequency	Percentage
<b>Age</b>	Below 25	72	71.3
	25-35 years	20	19.8
	35-45 years	3	3
	45 and above	6	5.9
<b>Gender</b>	Male	30	29.7
	Female	71	70.3
<b>Educational Qualification</b>	Bachelors Degree	63	62.4
	Masters Degree.	36	35.6
	Doctorates	2	2
<b>Profession</b>	Own Business	10	9.9
	Private Job/Government Job	43	42.6
	Profession	17	16.8
	Studying	31	30.7
<b>Income</b>	Less than 5 lakhs	70	69.3
	51kh-81kh	15	14.9
	81kh-121kh	11	10.9
	121kh-201kh	2	2
	201kh and above		3

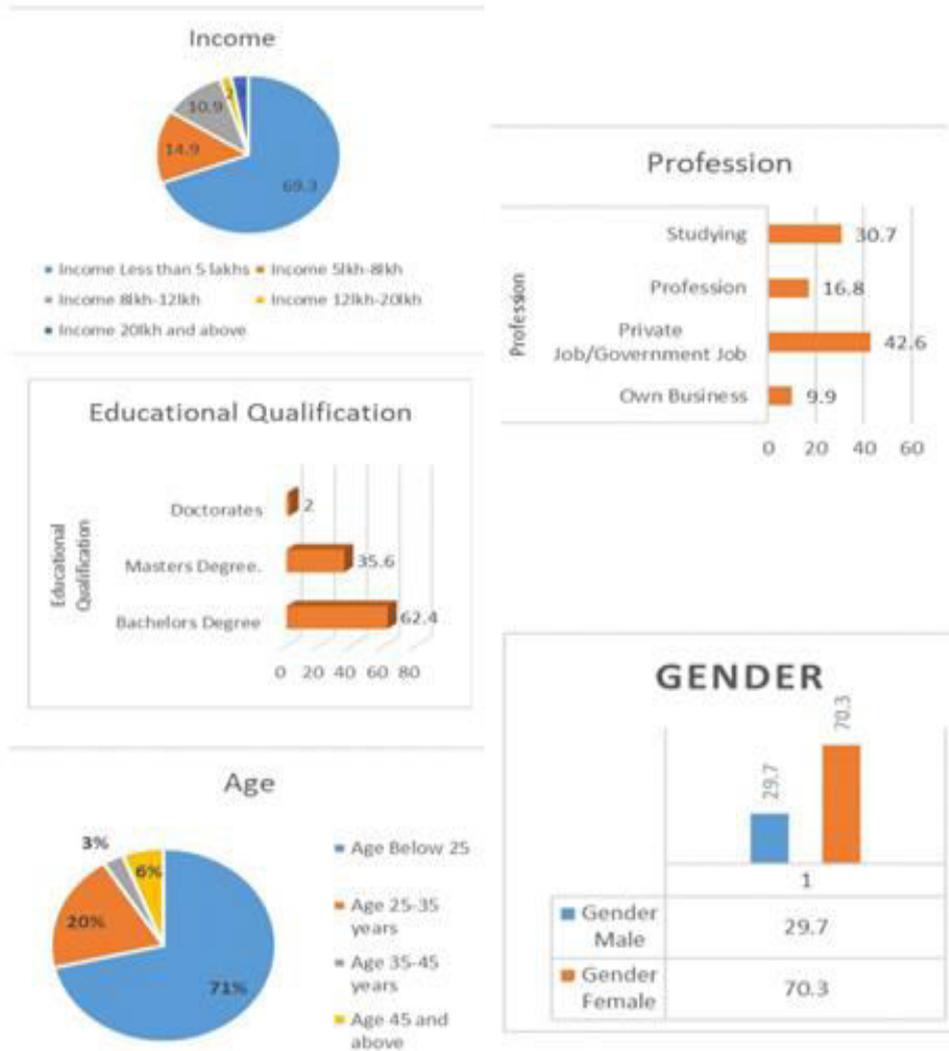


Figure 4.1: Demographics

From the data collected as the majority of the respondents fall under the age group between 18 – 25 that states there is a future scope for EV. Our area of focus was on the female respondents contributing 70.3% and male of 29.7 % of which 30.7% are students, 16.8% are working professional, 42.6% are in private or government job, 9.9% runs own business.

4.2 Factors Influencing Consumer’s Perception towards EV.

Table 4.2: Consumers Perception towards EV

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
There are appropriate number of charging stations available.	9.9%	30.7%	32.7%	21.8%	5%
The consumers are provided more choice in the purchase of EV	3%	12.9%	29.7%	41.6%	12.9%
Under a similar price, I would prefer to buy EV compared to traditional fuel vehicle	1%	9.9%	24.8%	41.6%	22.8%
EV produces less carbon emission over the fuel based vehicle	-	2%	11.9%	52.5%	33.7%

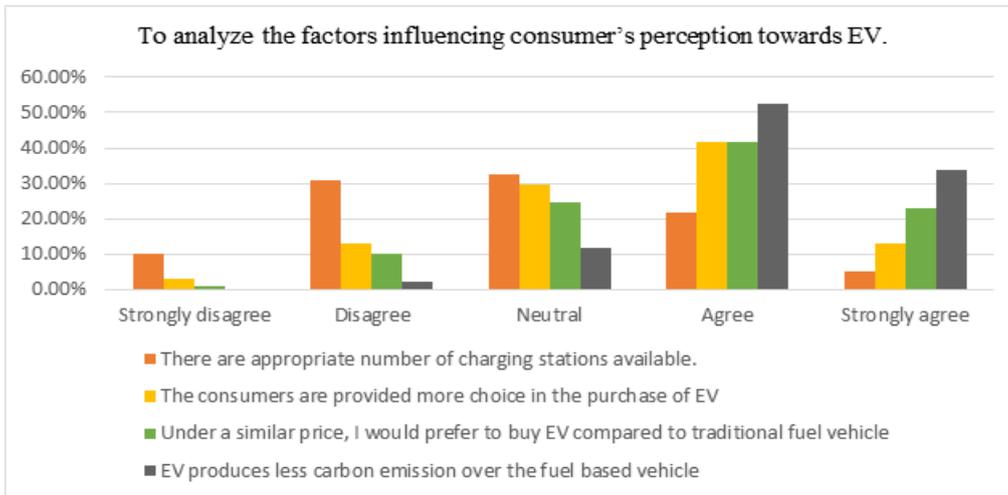


Figure 4.2

Respondents were asked if they preferred electric vehicles as a mode of long-distance travel. 64.4% found it difficult to adopt an EV, possibly due to the risk of battery charge depletion and the limited number of charging stations available, only 26.8% of respondents agreed that there are an adequate number of charging stations which shows that 73.2% don't agree that there are appropriate number charging stations this is a constraint for the adoption of EV.

It is clear that 54.5% of respondents believe there is more available choice for the purchase, as the government pushes for zero carbon emissions many automobile manufacturers have launched a variety of EV options in recent years. When given the option of buying an EV or a conventional vehicle for the same price, 64.4% of respondents chose the EV. This could be due to the environmental benefits of EVs. 86.2% of respondents agree that gasoline-powered vehicles have a negative impact on the environment, which could be a major factor in EV acceptance as a mode of transportation.

4.3 Consumers Cost Saving Strategies which Influences in Buying EV.

Table 4.3: Consumers Cost Saving.

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
EV is a best alternate choice to make due to volatile fuel price	-	-	18.85%	54.5%	26.7%
EV provides more benefits compared to traditional fuel vehicle	-	5.9%	25.7%	49.5%	18.8%
EV has fewer maintenance requirement and lower maintenance cost	2%	9.9%	29.7%	44.6%	13.9%
EV is more cost friendly compared to conventional vehicle	2%	8.9%	31.7%	44.6%	12.9%

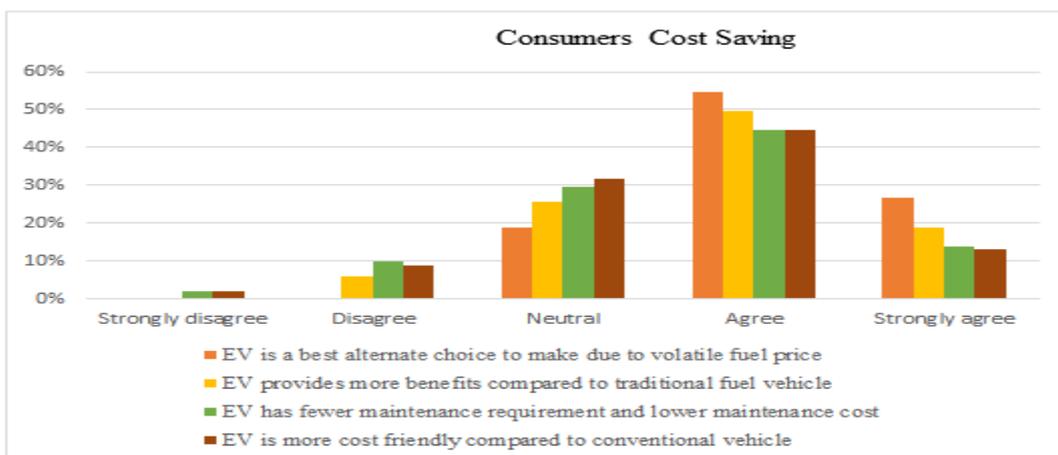


Figure 4.3

From the data obtained, due to the current volatility in fuel prices, 81.2% of respondents agree that EV is the best option considered, resulting in a significant cost savings. By examining the advantages provided by EV 68.3% agree that EV provides optimal benefits, which can include TOU rates, per kilowatt-hour discounts used to charge EV, emission, and environmental friendly. The other major cost for any vehicle is maintenance, and 58.5% of respondents agreed that EVs require less maintenance. This could be because traditional vehicles' internal combustion engines have more mechanical parts and thus have more complexities and difficulty in maintenance, whereas EVs are easy and cheaper to maintain due to their simple structure and operations. Considering the same factor, 57.5% believe that EVs are cost effective.

4.4 Awareness of Government Subsidies.

Table 4.4: Awareness of Government Subsidies

	Are you aware of the government incentives provided to purchase EV	Are you aware that the road tax is waived off at the time of purchase.	Are you aware that there is a discount offered on interest rate while availing loan to purchase EV	One time registration cost is waived off at the time of purchase	Do you think government is influencing positively for purchase of EV
Yes	43.6%	36.6%	41.6%	45.5%	69.3%
No	56.4%	63.4%	58.4%	54.5%	30.7%

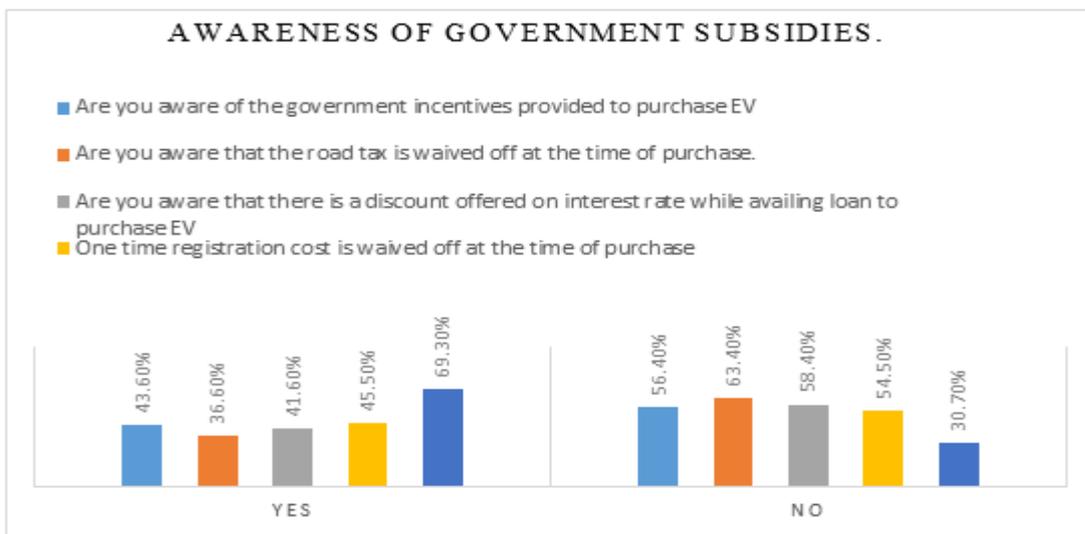


Figure 4.4

According to the analysis, the majority of respondents are unaware of various government incentives; only 36.6% of respondents in the total survey are aware that there is an incentive provided on the road tax at the time of purchase, and 63.40% are unaware of the same. Other advantages, such as the lower interest rate and the elimination of the one-time registration fee, are unknown to 58.40% and 54.50%. By the above analysis, even though people are unaware of various government incentives, 69.30% of respondents agree that the government is influencing positively for the purchase of EVs, and thus the government needs to take more active actions to reach out to the people.

Various Incentives Provided by the Government:

- Incentives for Purchase: The user receives a direct discount on the cost of the electric vehicle.
- Coupons: Financial incentive in which the amount is repaid later
- Subventions for interest: When obtaining a loan, a discount on the interest rate is provided.
- Exemption from paying road taxes: Road tax is waived at the time of purchase.
- Exemption from registration fees: The one-time registration fee associated with the purchase of a new vehicle is waived.

- Income tax break: Provided as a deduction from an individual's tax liability to the government
- Income tax benefit: A reduction in the amount of tax that an individual must pay to the government.
- Incentives for scrapping: Provided when old petrol and diesel vehicles are deregistered
- Others: Interest-free loans, top-up subsidies, special incentives on electric three-wheelers, and other benefits are also available.

	Mean	Standard Error	Standard Deviation	Sample Variance	Kurtosis	Skewness
There are appropriate number of charging stations available.	2.8118 81188	0.10408 7617	1.0460676 01	1.0942574 26	-0.61141	0.11967 5
The consumers are provided more choices in the purchase of Electronic Vehicles.	3.4851 48515	0.09710 0399	0.9758469 28	0.9522772 28	-0.1561	- 0.45156
Under the similar price, I would prefer to buy EV compared to traditional fuel vehicle.	3.7524 75248	0.09482 2336	0.9529526 81	0.9081188 12	-0.31612	- 0.47195
EV produces less carbon emission over the fuel based vehicles.	4.1782 17822	0.07091 487	0.7126856 19	0.5079207 92	0.35321 4	- 0.61236
On the scale of 1 to 5 (1being the lowest and 5 being the highest) your preference to use EV for long distance travel.	3.0594 05941	0.10700 4009	1.0753769 77	1.1564356 44	-0.40265	- 0.31691
EV is the best alternative choice to make due to volatile fuel price.	4.0792 07921	0.06702 0269	0.6735453 71	0.4536633 66	-0.7609	-0.0945
EV provides more benefits compared to traditional fuel vehicle.	3.8118 81188	0.08048 4758	0.8088618 09	0.6542574 26	-0.26707	- 0.33552
EV have fewer maintenance requirements and lower maintenance cost.	3.5841 58416	0.09148 6434	0.9194272 86	0.8453465 35	0.07675 4	- 0.48931
EV is cost friendly when compared to traditional vehicle.	3.5742 57426	0.08938 3515	0.8982932 11	0.8069306 93	0.19840 2	- 0.48054

There are appropriate number of charging stations available (M = 2.81, SD +- 0.104), the consumers are provided more choices in the purchase of Electronic Vehicles(M = 3.49, SD +- 0.097), Under the similar price, I would prefer to buy EV compared to traditional fuel vehicle(M = 3.75, SD +- 0.094), EV produces less carbon emission over the fuel based vehicles(M = 4.18, SD +- 0.070), On the scale of 1 to 5 (1being the lowest and 5 being the highest) your preference to use EV for long distance travel(M = 3.06, SD +-0.107), EV is the best alternative choice to make due to volatile fuel price(M = 4.08, SD +- 0.067), EV provides more benefits compared to traditional fuel vehicle(M = 3.81, SD +- 0.080), EV have fewer maintenance requirements and lower maintenance cost(M = 3.58, SD +- 0.091), EV is cost friendly when compared to traditional vehicle(M = 3.57, SD +- 0.089).

**Hypothesis 1:**

**Ho:** There is no significant difference in Consumer perception towards EVs between male and female.

**Ha:** There is a significant difference in Consumer perception towards EVs between male and female.

<b>t-Test: Two-Sample Assuming Equal Variances</b>		
	Female	Male
Mean	3.482857143	3.346666667
Variance	0.380861284	0.603954023
Observations	70	30
Pooled Variance	0.446878523	
Hypothesized Mean Difference	0	
Df	98	
t Stat	0.933601723	
<b>P(T&lt;=t) one-tail</b>	<b>0.176401983</b>	
t Critical one-tail	1.660551218	
<b>P(T&lt;=t) two-tail</b>	<b>0.352803966</b>	
t Critical two-tail	1.984467404	

Since P Value is more than 0.05 Null hypothesis accepted and the alternative hypothesis rejected. It can be concluded that “there is no significant difference in Consumer perception towards EVs between male and female”

**Hypothesis 2:**

**Ho:** There is no significant impact of government subsidies on cost of the EVs

**Ha:** There is a significant impact of government subsidies on cost of the EVs

<b>SUMMARY OUTPUT</b>	
Regression Statistics	
Multiple R	0.286465186
R Square	0.082062303
Adjusted R Square	0.072790205
Standard Error	0.686257338
Observations	101

From the above table it can be inferred that there exists positive correlation between government subsidies and cost of the EVs i.e., 0.2864. any variance in cost of the EVs is explained by government subsidy upto 8.2%.

<b>ANOVA</b>					
	df	SS	MS	F	Significance F
Regression	1	4.168115	4.168115	8.850457	0.003681577
Residual	99	46.62396	0.470949		
<b>Total</b>	100	50.79208			

Government subsidies explained a significant proportion of variance in cost of the EVs,  $R^2 = 0.082$ ,  $F(1,99) = 8.850457$ ,  $p < .05$ .

	<b>Coefficients</b>	<b>Standard Error</b>	<b>t Stat</b>	<b>P-value</b>
<b>Intercept</b>	3.374291321	0.278724	12.10621	3.04E-21
<b>Government Subsidy</b>	0.214238988	0.072014	2.974972	0.003682

Linear regression analysis was used to test if the government subsidies significantly predicted adoption of precision cost of the EVs. The results of the regression indicated the predictors explained 8.2% of the variance ( $R^2 = 0.082$ ,  $F(1,99) = 8.850457$ ,  $p < .05$ ). It was found that government subsidy significantly predicted cost of the EVs ( $\beta = 0.2142$ ,  $t = 2.974972$ ,  $p < .05$ ). Hence Null hypothesis is rejected and the alternative hypothesis accepted. i.e., “There is a significant impact of government subsidies on cost of the EVs”

**5. FINDINGS AND SUGGESTIONS–**

**5.1 Findings**

1. There aren't enough charging stations to go around, making long-distance travel with electric vehicles difficult. People are eager to buy EVs as an alternative, but the limitation is the risk of battery depletion.

2. People are shifting from conventional vehicles to EVs as they become more concerned about environmental protection, which has resulted in various automobile companies forming strategic alliances and speeding up the production of EVs.
3. Given the current volatile fuel prices, EV is emerging as a preferential choice and an appealing cost-cutting strategy.
4. Maintenance is another significant cost for any vehicle. This could be due to the fact that traditional vehicles' internal combustion engines have more mechanical parts, resulting in greater complexities and difficulty in maintenance, whereas EVs are simple and inexpensive to maintain due to their simple structure and operations.
5. EVs are simple and inexpensive to maintain due to their simple structure and operation.
6. The government is launching a number of different EV adoption programmes. However, none of the benefits of each of these initiatives are communicated to the public, which is not creating the expected change in the choice.
7. Based on the responses it is observed that majority of respondents are with in the age group of 18 - 25 who have showed their interest to purchase EV which clearly states that EV has an high demanding future.

### **5.2 Suggestions**

- 1) The number of charging stations currently available are not adequate. If EV has to be used in full effect, then the number of charging stations has to be increased.
- 2) The future costs of EV might be still reduced because of mature technology that can reduce the price of battery which makes EV purchase cost much more cost friendly to any conventional vehicle.
- 3) With collaboration of more technological innovation by the automobiles they can reduce cost of batteries that might increase the number of customers who opt EV.
- 4) The government should take more decisive measures to persuade individuals to take advantage of various incentives and to purchase EVs.

### **6. CONCLUSION**

Vehicle energy transition is necessary due to the depletion of fossil fuels and the ongoing increase in fuel prices. By promoting EVs and providing subsidies for their purchase, the government has implemented incentives to reduce pollution levels. As people are concerns about environmental protection and cost saving, they are switching from conventional automobiles to EVs, which has led to a number of automotive companies accelerating the manufacture of EVs.

The respondents are ready to select EV as a transportation choice if the infrastructure is appropriately created to accommodate EV and are well of the environmental and financial benefits provided by EV and the abolition of harmful toxics produced by conventional vehicles. The cost of fuel, which is expensive right now, and the expense of maintenance and repairs, both accounts for a sizable portion of the cost of any vehicle, are the two main expenses that can be reduced when choosing an EV. These financial advantages draw interest and confirm that EVs are more affordable.

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**A STUDY ON THE IMPACT OF PRODUCT PACKAGING ON CONSUMER BEHAVIOR****Pranjul Mishra**

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**ABSTRACT**

*The research study aims at determining how product packaging impacts consumers' buying behaviour. It helps to understand the components which help to determine the richness or brand. The relationship between dependent and independent variables is also established. A sample of 61 respondents is taken into consideration and several tests are performed. According to the research findings we are able to find that packaging is one of the most important aspects while purchasing any product. The research concludes that other factors like color, packaging, and wrapper are also important factors while making a purchase decision. The framework of the study determines the relationship between buying decisions made by the consumer and other major factors like packaging, color, and design. The data collected is through a structured questionnaire with the help of Google forms.*

*Keywords: Packaging, consumer decision making, consumer behaviour.*

**INTRODUCTION**

Nowadays packaging has become one of the methods for promotion and revenue generation through sales. The buying behaviour of consumers is revived by color, shape, packaging material, and quality. Consumer buying behaviour is also greatly influenced by brand image and advertisements. Packaging also provides distinctive value to the product and helps to enhance the brand image. Packaging also helps the sales team to grab the attention of the target audience. It's an effective tool when it comes to communication. Before making a final purchasing decision, the packaging would be the last thing consumers would take into consideration, and hence it's worth investing time towards product packaging.

While entering the market if the packaging doesn't meet the required standards and is ugly then the integrity is lost. Packaging primarily includes taking into account the shape and size of the product and the wrapping style and also involves the design, labeling, and how the information is printed on the product. It is quite possible that product packaging might not appeal to a certain group of consumers which poses a challenge to the producers and modifications have to be done accordingly.

**REVIEW OF LITERATURE**

Emotional Branding: A New Way to Create Brand Loyalty for FMCG Companies. By Astha Joshi and Dr. Geeta Nema. Journal of Management Value & Ethics, Apr-June 15 Vols No 2 - ISSN-2249-9512.

Chocolate, Colour, and Consideration: An Exploratory Study of Consumer Response to Packaging Variation in the South African Confectionery Sector. International Journal of Marketing Studies Vol. 7, No. 1; 2015 – SSN 1918-719X E-ISSN1918-7203. **AIMS AND OBJECTIVE:**

- To understand consumer decision-making in FMCG industries.
- To analyse the spending of the consumers
- To study the behaviour of consumers

**HYPOTHESIS**

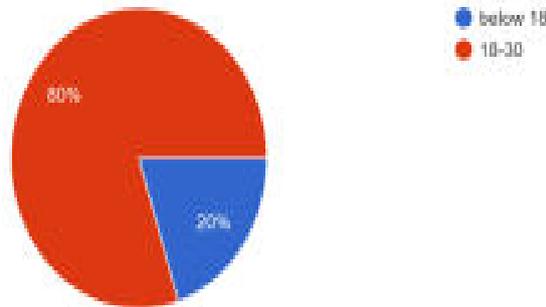
- **H0:** Decision making of consumer does not directly depend on packaging · **H1:** Decision making of the consumer depends directly on packaging · **H0:** Variable of decision making is not directly related to age
- **H1:** Variable of decision making is directly related to age

**RESEARCH AND METHODOLOGY**

Research design is descriptive. The data for the study is collected from both primary and secondary sources. Primary data is generated through an online survey. The population targeted for the study are Mumbai based individuals ranging from the age group of below 18 to above 30 years. A sample of 61 respondents is collected by randomly sending the survey forms through communication means like email and Whatsapp, etc. And secondary data is collected via reliable website.

DATA INTERPRETATION

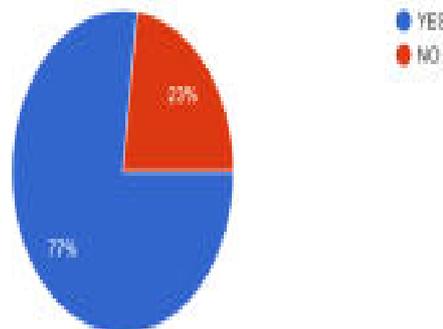
1. Age



In the survey the data is collected from the age group of below 18 and above 30. The majority of the people are from the age group of 18-30. Around 80% of the population are from the age group or below 18.

2. Does the color of the package have an impact on your buying behavior?

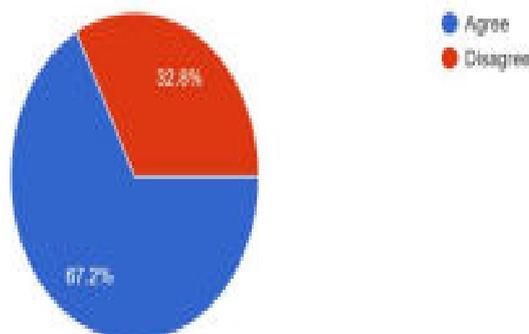
61 responses



In the survey we asked the question "Does the color of the package have an impact on your buying behavior?" and the majority of the population answered yes and 23% of the population denied it.

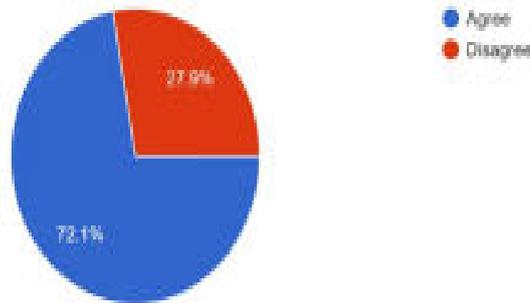
3. Does the image of the brand have an impact on your buying decision ?

61 responses



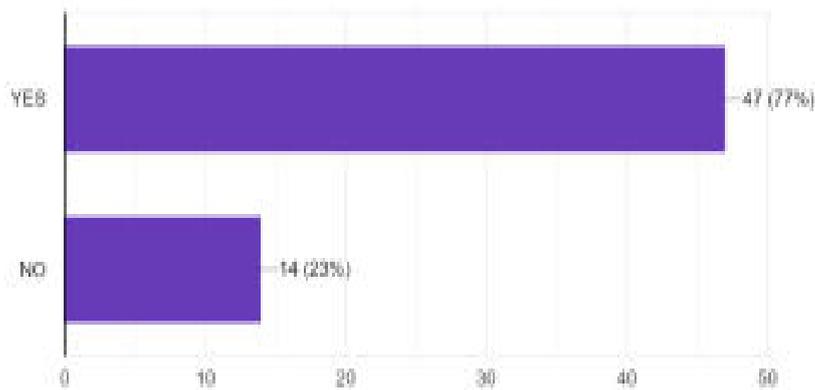
In the survey, we can analyse that 67.2% of the population considers the brand image before buying or availing any kind of service and the rest one percent selected "disagree"

4. Does the packaging of the product helps in differentiating from the competitor?  
61 responses



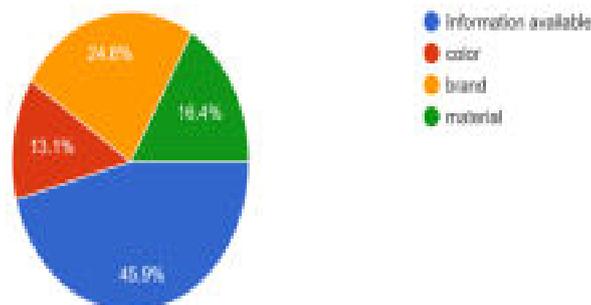
In the survey we asked the respondents " Does packaging of the product helps in differentiating from the competitor? to which 44respondents agreed and 17 respondent disagreed.

5. Dose the shape of the product affect your decision to buy the product ?  
61 responses



In the survey, 77% of the population agreed to the fact that the shape of the product affects their buying decision and the rest of them denied.

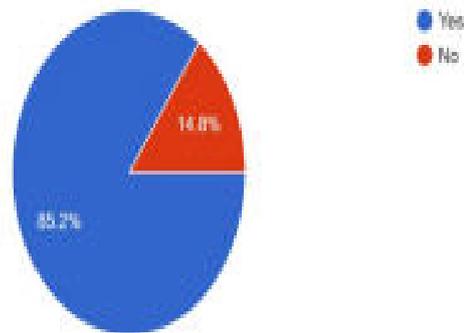
6. Which packaging elements are most important while deciding on what product or services you will buy?  
61 responses



In the survey, 24.6% of the population selected "Brand" as the most important packaging element while deciding on which product or service to buy and 13.1% choose color as the packaging element.

7. Is generic packaging a turnoff while purchasing a product?

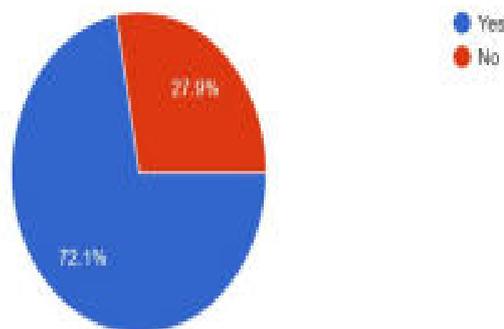
61 responses



In the survey we asked the respondents Is generic packaging a turnoff while purchasing a product? to which more than 14.8% of the population said "no" and the rest agreed.

8. DO you switch your brand due to a change in packaging of existing brand ?

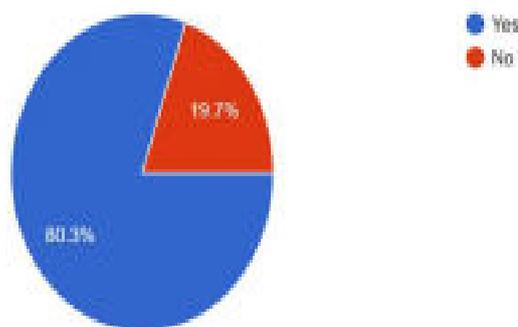
61 responses



From the survey we get to know that 27.9% of the population do not switch their brand due to change in packaging and the rest 72.1% said "yes".

9. Do you evaluate the product according to the printed information on the package ?

61 responses



Out of the 61 respondents, 12 people evaluate the product according to the printing information on the package and the rest of the population do not evaluate on the basis of printed information on the package.

10. What is your the top priority towards packaging ?

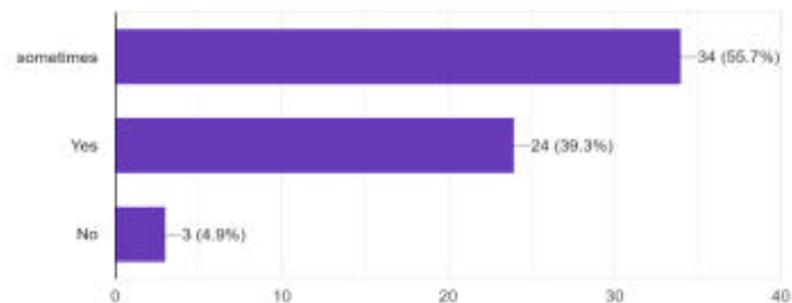
61 responses



In the survey, the next question asked is "What is your top priority towards packaging"? and more than half the population prefer "eco-friendly" as the top priority when it comes to packaging and the least is "protective".

11. Are you able to pay an extra amount for good packaging ?

61 responses



From the survey, we can say that the majority of the population is willing to pay an extra amount for good packaging and around 3 people would not prefer paying an extra penny towards packaging.

**CONCLUSIONS**

After completing the research work on the impact of product packaging on consumer behaviour we have set forth the following conclusions:

- In today's era packaging can be considered as one of the most valuable instruments for marketing, sales and to add customer value.
- It has been also analysed that elements of packaging are also taken into consideration before making purchase decision. For many of the respondents "aesthetic" appeal has been one of the major criteria while considering the packaging of the product.
- Results showing the impact of packaging on consumer behaviour depending on the shape of the product, majority of the consumers denied the fact that shape matters. · The research work also concludes that packaging has become one of the ways of communication with the consumers in relation to the information printed on the package · The study also reveals that the color of the package has a major impact on the product purchase decision.

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- <https://www.mckinsev.com/industries/consumer-packaged-goods/our-insights/the-recovery-and-lasting-effects-of-covid-19> consumer-demand.
- <https://www.emerald.com/insight/content/doi/10.1108/JIUC-10-2019-0017/full/html>

**A STUDY ON CONSUMER BEHAVIOR OF YOUTH TOWARDS BOAT COMPANY'S PRODUCTS****Harshada Laxman Mhatre<sup>1</sup> and Mitesh Radheshyam Lohia<sup>2</sup>**

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**ABSTRACT**

*Consumer Behaviour is the behaviour that the consumers display in searching for, purchasing, using, evaluating and disposing of products and services that they expect will satisfy their needs. Consumer behaviour is influenced by various factors like individual, environmental and decision making and these factors may be helpful to marketers in their marketing. Marketing is all about understanding consumer needs and influencing the customer to buy product by creating certain wants in the minds of the customer. Due to increase in Knowledge of Technology, Consumers Buying Behaviour towards of Goods and Services keeps on changing. Therefore, nowadays before launching new product in Market, Entrepreneurs have to know the Consumer Behaviour of Target Market. It has become the most essential element in the Marketing which lead the Business towards Growth and helps in earning good corporate image in the market.*

*Keywords: Consumer Behaviour, Entrepreneur, Lifestyles, Marketing*

**INTRODUCTION**

The growing Smartphone ecosystem in India has given a big boost to accessories like headphones and earphones. There has always been a plethora of brands available like Apple, JBL, Sony and Bose but there were two problems:

Firstly products from these companies were too expensive for the price-sensitive Indian consumer. The prices at which these players were offering their products were way too high vis-a-vis customer expectations.

The second challenge was that many consumers were habituated to using earphones that come packaged with Smartphone's. Hence, they did not find a reason to pay a premium price for just the audio accessories.

Also, the street vendors selling Chinese products and second copies of well-known brands came at a much lower price but significantly lacked quality and durability. This is where boAt rocked the opportunity.

The Boat is leading today in Indian Markets in the Earwear category and has been recognized as one of the best brands in India and the fifth largest wearable Indian brand globally. The founder Samir Mehta and co-founder Aman Gupta created the company Boat back in 2016. The Boat Company has been recognized with various awards and remarkable achievements nationally as well as internationally. Youth of India are more Digital techno-savvy now; it was beneficial for the Boat Company to capture the markets with their products. The same wireless products of other companies in Indian Markets were highly expensive, whereas the Boat Company aimed for their consumer to bring an affordable, durable, and more importantly fashionable audio product into Indian Markets. Even after the Covid-19 pandemic hits India, the Boat Company's sales were raised to double profits. As the demand for Earphones and Neckband increased among Youth because of online Learning, Online Movies, work from home etc during the pandemic. Boat has started selling via B2C Service i.e. Business to Consumer, which made the price rates of all the various Boat products more affordable to the Indian consumer during the pandemic period. After getting into Indian Markets for a long time and knowing the behaviour of the consumer towards their several products, they made several changes in the products and initiated to launch their water-resistant and sweat-proof hearable products.

Entrepreneurs of Boat company are Samir Mehta and Aman Gupta, Company stands at the valuation of approx. Rs.2200 crores in the Indian Market. As per The Economic Times, the Boat Company successfully raised approx. Rs 680 crores as the Net Profit of the company in the quarter ended in June, 2022 from Rs 3 crores a year ago.

**LITERATURE REVIEW**

**Hawkins, Best, Coney and Mokherjein** their book on Consumer Behaviour discussed several factors affecting consumer behaviour for buying such as demographic and social influences (family and household), group influence, impact of advertising and internal influences (learning, perception, attitude etc.). The book elucidated the topics such as types of consumer decisions, purchase involvement and product involvement.

One of the common views is that understanding consumer behaviour has become a factor that has a direct impact on the overall performance of the businesses (**Kotler and Keller, 2012**).

Another view suggests that understanding consumer behaviour has become crucial especially due to fierce competition in retail industry in the UK and worldwide (**Lancaster et al, 2002**). This chapter will introduce some other areas of research background of consumer behaviour addressing the works of researchers and marketers. Moreover, consumer decision making process, in particular, five stages of consumer decision making process will be discussed in detail.

**OBJECTIVES**

The present study is based on specific objectives, which have been selected to keep importance and the rationality of the research topic.

A few of the listed main objectives of the research paper that are taken into the study are as follows:

1. To study the consumer behaviour towards the Boat Company.
2. To study which features of the Boat product consumers like the most.
3. To examine the Satisfaction level Consumers towards several products of Boat Company.
4. To identify awareness of Boat Company and its products among youth in Mumbai.

**RESEARCH METHODOLOGY**

The study is Descriptive in Nature. The Survey method was followed to conduct the research with practical information and to know the various aspects of the consumer behaviour. In survey method, a primary data was collected by creating a survey form. The survey form was shared among the Degree College students of various programmes like BMS, BAF, BBI, B.com, BMM, and BFM of Thakur College of Science and Commerce, Mumbai. The Students of the college were being contacted through their respective class-teachers. The responses were collected digitally through the Online Google Forms. Students of the college were provided a short link of the form through their class-teachers on their mobile. The survey form was consisted questionnaire related to the Boat Company’s Product. The aim of survey was to examine and analyse the behaviour of the respondent towards Boat Company.

450 young consumers in the age group 16 to 20 years are taken for study. The primary data received from the students of the college, will provide the realistic point of view towards the consumer behaviour of the respondents towards the Boat Company. The analysis of the primary data and interpretation to it will provide genuine information for the research.

**HYPOTHESIS**

**Hypothesis – 1**

**H0:** Youths in Mumbai are not aware about Boat Company and its products.

**H1:** Youths in Mumbai are aware about Boat Company and its products.

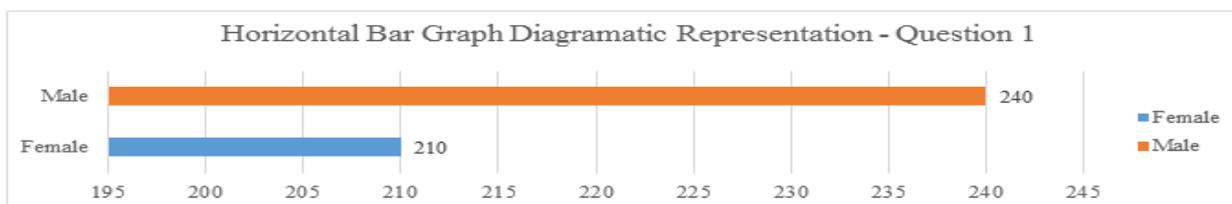
**Hypothesis – 2**

**H0:** Customers are not satisfied with Boat Company products.

**H1:** Customers are satisfied with Boat Company products.

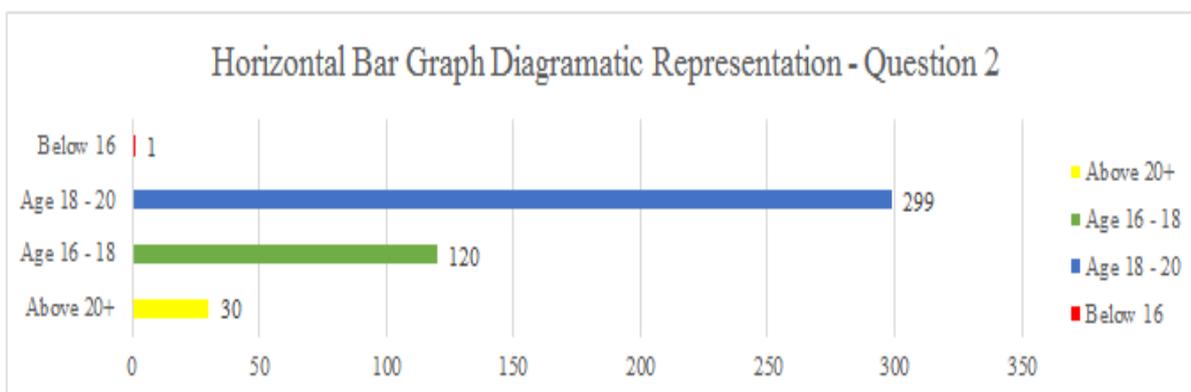
**DATA ANALYSIS AND INTERPRETATION**

Question - 1	Gender	Percentage ( % )
Female	210	46.67
Male	240	53.33
<b>Grand Total</b>	<b>450</b>	<b>100.00</b>



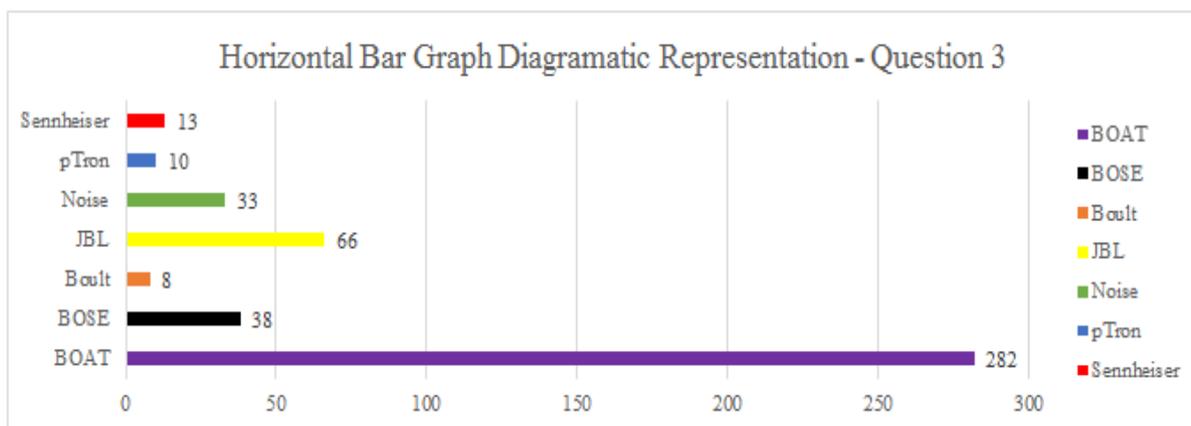
As per the data received from the survey, there are total 450 respondents out of which 240 male respondents and 210 female respondents.

Question - 2	Age Criteria	Percentage (%)
Above 20+	30	6.67
Age 16 - 18	120	26.67
Age 18 - 20	299	66.44
Below 16	1	0.22
<b>Grand Total</b>	<b>450</b>	<b>100.00</b>



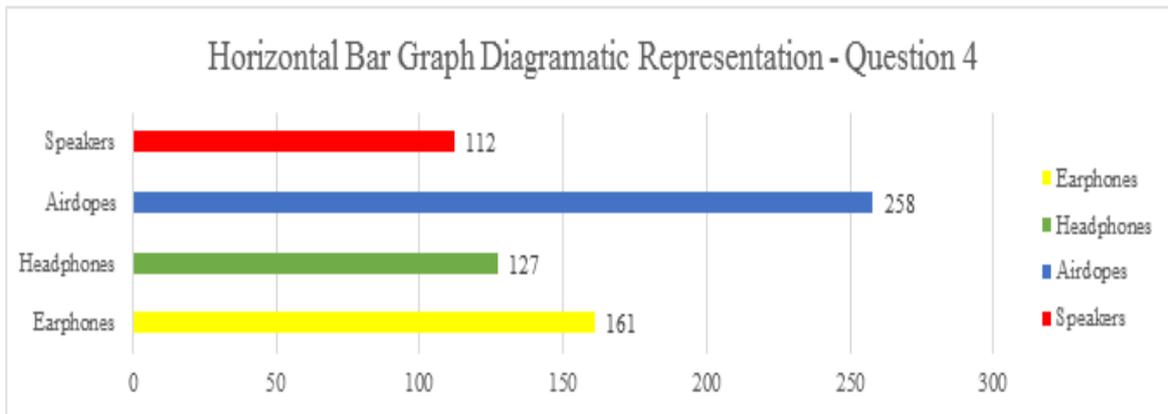
As per the data received from the survey, out of 450 Responses, 299 responses are collected from age group of 18-20 years, 120 responses are collected from age group 16 to 18 years and 30 responses are collected from age group more than 20 years of age.

Question - 3	Which is your Favourite Brand in the TWS Technologies ? ( TWS - True Wireless Stereos )	Percentage (%)
BOAT	282	62.67
BOSE	38	8.44
Boult	8	1.78
JBL	66	14.67
Noise	33	7.33
pTron	10	2.22
Sennheiser	13	2.89
<b>Grand Total</b>	<b>450</b>	<b>100.00</b>



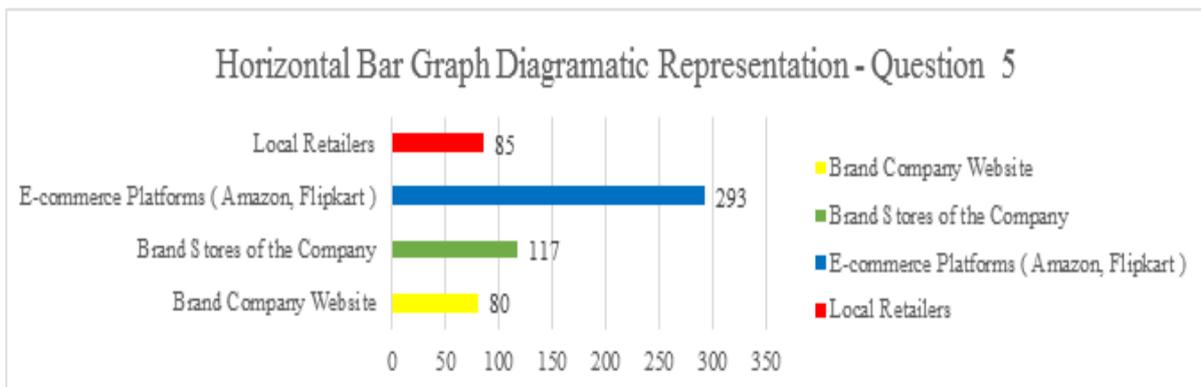
As per the data received from the survey, 282 respondent's favourite brand in TWS Technologies is the Boat Company which is 62.67% of the total data received from the survey.

Question - 4	Which of these products do you utilize in TWS Technologies ?	Percentage (%)
Earphones	161	35.78
Headphones	127	28.22
Airdopes	258	57.33
Speakers	112	24.89
<b>Grand Total</b>	<b>658</b>	<b>146.22</b>



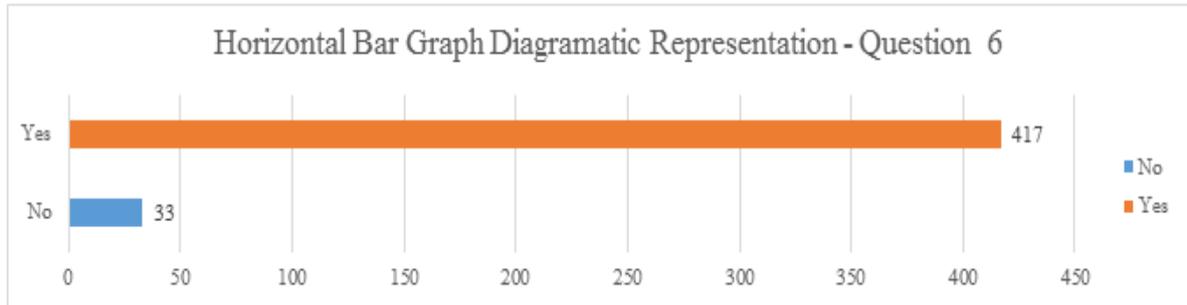
As per the data received from the survey, 57% of respondents use Wireless Bluetooth Air dopes, 35% of respondents use Earphones, 28% of respondents use Headphones and 24% of respondents use Speakers.

Question - 5	From where do you purchase the 'Portable Bluetooth Electronic Devices' ?	Percentage (%)
Brand Company Website	80	17.78
Brand Stores of the Company	117	26.00
E-commerce Platforms ( Amazon, Flipkart )	293	65.11
Local Retailers	85	18.89
<b>Grand Total</b>	<b>575</b>	<b>127.78</b>



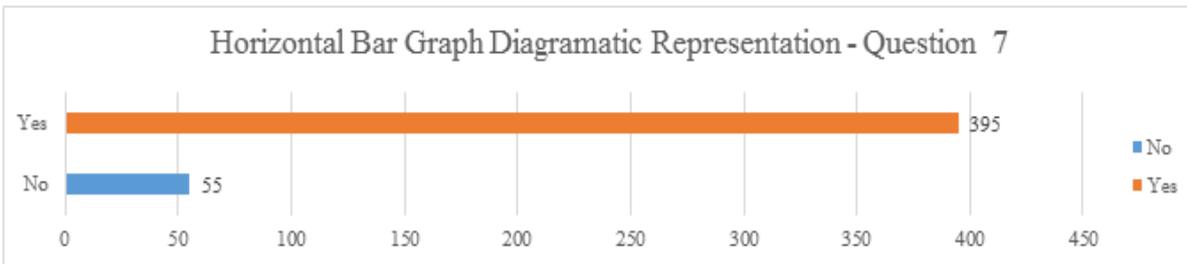
As per the data received from the survey, 65% of respondents prefer to purchase their Portable Bluetooth Electronic Device in TWS Technologies from the E-commerce platforms like Amazon and Flipkart. 26% of respondents prefer to buy products from Brand stores of the company. 17% of respondents prefer to purchase their devices from Brand Company Website, 18% of respondents prefer to buy from the Local Retailers of their location.

Question - 6	Are you aware about the Imagine Marketing Private Limited Company ( Marketing name as Boat )	Percentage ( % )
No	33	7.33
Yes	417	92.67
<b>Grand Total</b>	<b>450</b>	<b>100.00</b>



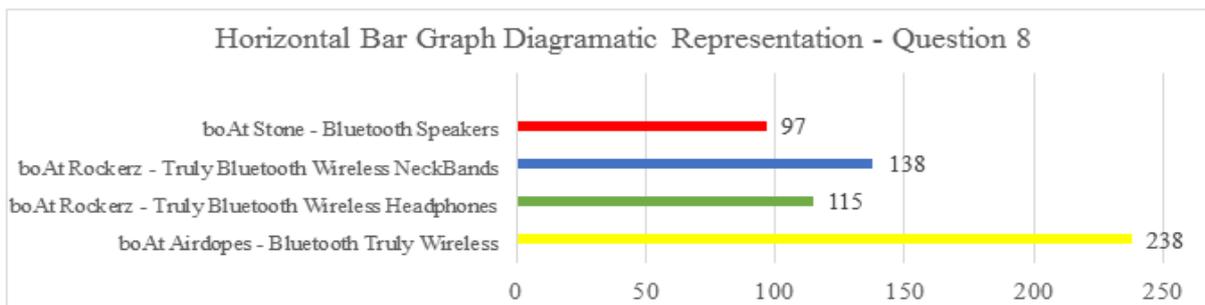
As per the data received from the survey, 92% of respondents of the survey know about the Boat Company.

Question - 7	Do you utilize the products of the BOAT Company ?	Percentage ( % )
No	55	12.22
Yes	395	87.78
<b>Grand Total</b>	<b>450</b>	<b>100.00</b>



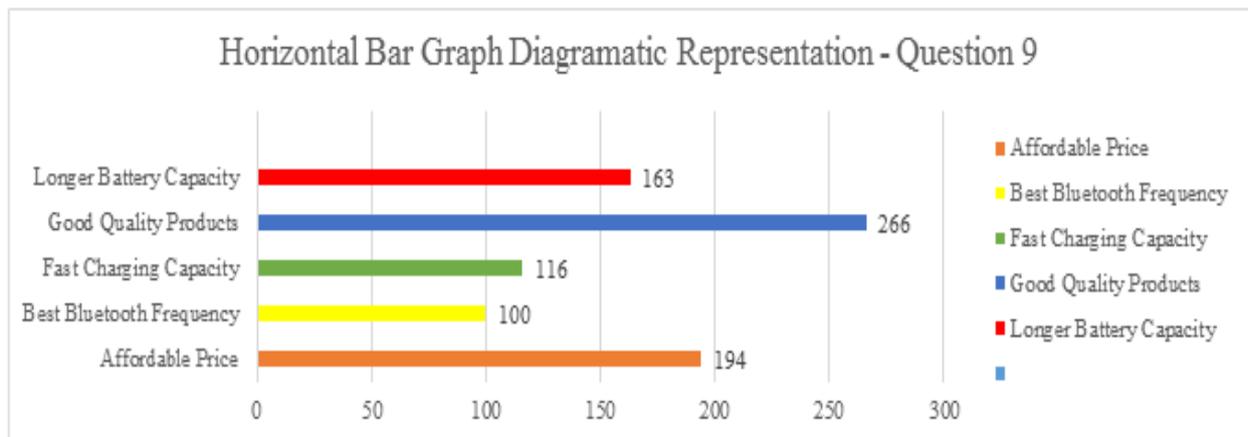
As per the data received from the survey, 87% of respondents use products of the Boat Company.

Question - 8	Which products of the Boat Company you have purchased till now ?	Percentage ( % )
bo.At Airdopes - Bluetooth Truly Wireless	238	52.89
bo.At Rockerz - Truly Bluetooth Wireless Headphones	115	25.56
bo.At Rockerz - Truly Bluetooth Wireless NeckBands	138	30.67
bo.At Stone - Bluetooth Speakers	97	21.56
<b>Grand Total</b>	<b>588</b>	<b>130.68</b>



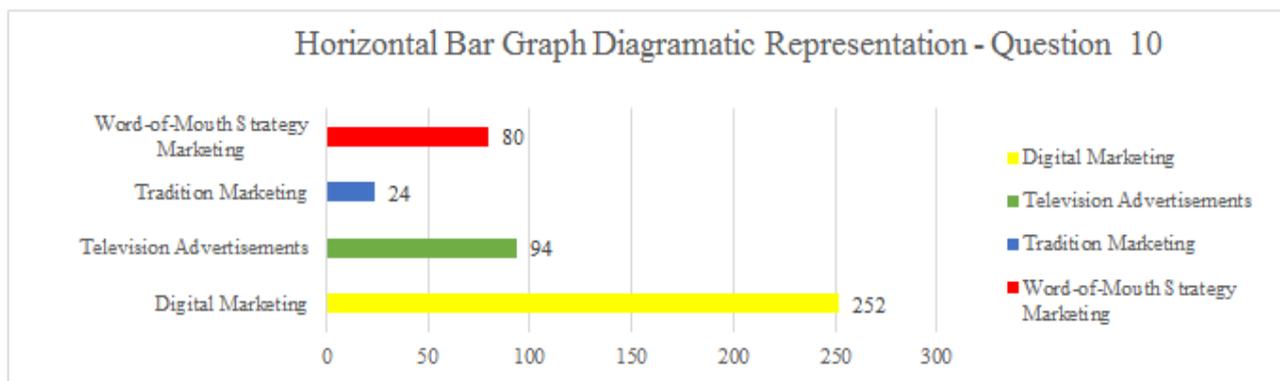
As per the data received from the survey, 52% of respondents use the BoAt Air dopes. 30% of respondents use BoAt Rockerz- Truly Bluetooth Wireless Neckbands, 25% of respondents use BoAt Rockerz- Truly Bluetooth Wireless Headphones and 21 % of Respondents use Bluetooth Speakers.

Question - 9	What are your favorite features of the products of the Boat Company ?	Percentage ( % )
Affordable Price	194	43.11
Best Bluetooth Frequency	100	22.22
Fast Charging Capacity	116	25.78
Good Quality Products	266	59.11
Longer Battery Capacity	163	36.22
<b>Grand Total</b>	<b>645</b>	<b>143.33</b>



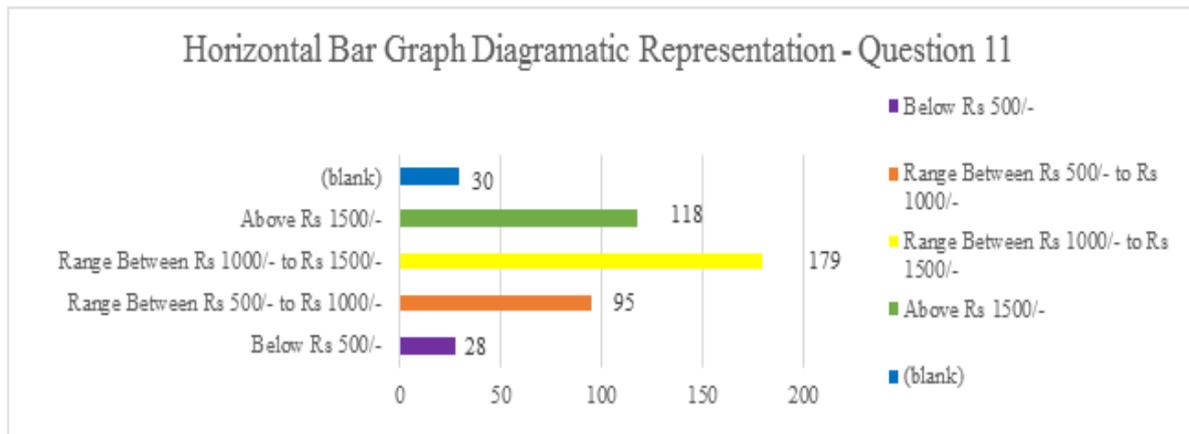
As per the data received from the survey, 59 % of Respondents prefer boat product because of good Quality, 43% of Respondents prefer boat product because of Affordable Price, 36 % of Respondents prefer boat product because of Longer Battery Capacity, 25 % of Respondents prefer boat product because of fast charging, 22 % of Respondents prefer boat product because of best Bluetooth Frequency.

Question - 10	From where did you get to know the products of the Boat Company ?	Percentage ( % )
Digital Marketing	252	56.00
Television Advertisements	94	20.89
Tradition Marketing	24	5.33
Word-of-Mouth Strategy Marketing	80	17.78
<b>Grand Total</b>	<b>450</b>	<b>100.00</b>



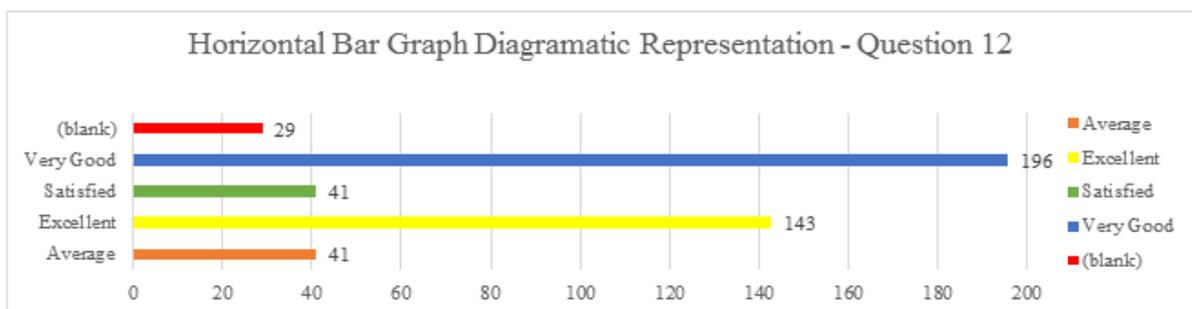
As per the data received from the survey, 56% of respondents get to know about boat company through digital marketing, 20% of respondents get to know about boat company through Television advertising, 17% of respondents get to know about boat company through word of Mouth Strategy Marketing and only 5% get know through Traditional Marketing.

Question - 11	By which price range have you purchased the products of the Boat Company ?	Percentage (%)
Below Rs 500/-	28	6.22
Range Between Rs 500/- to Rs 1000/-	95	21.11
Range Between Rs 1000/- to Rs 1500/-	179	39.78
Above Rs 1500/-	118	26.22
(blank)	30	6.67
<b>Grand Total</b>	<b>450</b>	<b>100.00</b>



As per the data received from the survey, 39% of respondents prefer to purchase product of boat Company Range from Rs. 1000 to Rs. 1500, 26% of respondents prefer to purchase product of boat Company Range above Rs. 1500, 21% of respondents prefer to purchase product of boat Company Range from Rs. 500 to Rs. 1000, 6% of respondents prefer to purchase product of boat Company Range below 500.

Question - 12	How was your experience after purchasing and using the products of Boat Company ?	Percentage (%)
Average	41	9.11
Excellent	143	31.78
Satisfied	41	9.11
Very Good	196	43.56
(blank)	29	6.44
<b>Grand Total</b>	<b>450</b>	<b>100.00</b>



As per the data received from the survey, 43% of Respondents find Boat products as very good. 31% of Respondents find Boat products as Excellent, 9% of Respondents find Boat products as Satisfactory.

### LIMITATIONS

While studying the research paper, we faced few problems listed below:

1. Consumer Behaviour is not static but it varies from time to time.
2. Data is collected only from Degree students of Thakur College of Science and Commerce, Mumbai.

**FINDINGS**

1. As per the research study, the researcher find out that, youth consumers in Mumbai use Boat Company products because it has advance features, affordable price and durability as compared to other companies.
2. As per the research study, the researcher find out that, youth consumers are more satisfied with the Boat products as compared to other competing brands.
3. As Per the research study, the researcher find out that, Boat Company promotes their product with help of Digital Marketing rather than Traditional Marketing.
4. As Per the research study, the researcher find out that, Consumers are delighted with Boat Company products.

**CONCLUSION**

On the basis of the responses received from respondents based on questionnaire majority of respondents said that they prefer Wireless Bluetooth Airdopes and Majority of them using Boat Airdopes. Many respondents prefer to buy their portable electronic device from E-commerce platform and very few consumers prefer to buy products from Brand Company, Websites and Retailers. It means nowadays consumers interested in buying product directly from Company rather than buying from local Retailers. 92% of the sample population know about Boat Company, it indicates Boat Company is enjoying good reputation in the market. 87% of sample population using Boat Company's product, it indicates Boat company slowly and steadily increasing Market share in Mumbai. Most of Respondents like Boat products because of good quality, Longer battery capacity, fast charging capacity and best Bluetooth Frequency and affordable price, it indicates boat has considered all factors like Quality, Durability, Affordability at the time of developing their Product.

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5. Think School – Channel on YouTube  
How Aman Gupta's MARKETING STRATEGY turned Boat into a 1500CR Company: Business case study – YouTube.

**A CRITICAL ANALYSIS OF WORKPLACE DISCRIMINATION FACED BY WOMEN****Shrishti Singh<sup>1</sup> and Dr. Rupal Shroff<sup>2</sup>**<sup>1</sup>Brunel University, London, UK<sup>2</sup>Thakur College of Science & Commerce**ABSTRACT**

*This study reviews 15 journal papers examining the many kinds of workplace discrimination women encounter in various employment sectors and nations. Unfair opportunities, employment segregation, income disparity, sexual harassment, unfair performance appraisal, lack of guidance/mentoring, and other types of discrimination against women exist. Considering the word limit constraints, the articles were evaluated on two of the specified characteristics because they show a significant form of inequality on a large scale when compared to the other aspects. These issues will be addressed through (a) in-depth study based on various ideologies in selected articles, (b) samples from various areas and employment sectors used in articles, and (c) theories proposed by scholars to explain particular causes of inequality. Wage disparity and assignment of higher authority are two of the elements examined in the article. Theoretically, female-dominated industries should have greater income equity, less gender discrimination, and a higher proportion of executive women than male-dominated industries, but it doesn't appear to be so. The choice of appropriate research methodologies was solely based on the nature of the study issues. Quantitative analysis using questionnaires and basic sample methodologies and qualitative analysis are prevalent data gathering methods in the selected papers.*

**INTRODUCTION**

The change to a service economy and rising levels of education and training have resulted in a major increase in the number of working women (Dalingwater, 2018). In addition, several legislations were enacted to encourage women to work, such as the Equal Pay Act, the Employment Protection Act of 1982 and the Sex Discrimination Act of 1974. (Dalingwater, 2018). According to the International Labour Organization (ILO), quality employment is defined as work that pays well and gives possibilities for growth and advancement (International Labour Organization, 2019). However, there appears to be a disparity in the number and quality of jobs offered to women. Furthermore, gender attitudes and beliefs are preserved and transmitted, meaning that women are inferior to men in their work obligations, creating further inequalities for women in organisations.

The three categories of study that explain the development of gender-related behaviours in organisations are biological, socialisation, and structural/cultural theories (Smith-Doerr et al., 2019). According to the authors of the gathered publications, the study of gender and management has resulted in sameness, with research on women in leadership either being polarised or overlooked. As a result, they advocate for greater attention on the frequently domestic part of being a woman and how this contributes to concerns like salary disparities, getting high authority assigned, and other discriminating characteristics.

Women's job advancement, family choices, income, and the amount of authority they exert are all influenced by discrimination, both overtly and implicitly (Alkadry and Tower, 2011; Leslie, Manchester and Dahm, 2017).

Furthermore, this study investigates if one's level of authority, defined as the number of people one supervises and the amount of money one is responsible for, is connected to one's gender (Alkadry and Tower, 2011). No rules are broken when one gets paid more for having more authority. However, if an employee's sex predicts the amount of power he/she will have, authority level becomes a hidden substitute for blatant sex-based wage discrimination (Alkadry and Tower, 2011). According to evidence in the study, gender has had a big effect on the position/power granted to an individual, further creating a challenging atmosphere for women and increasing the pay gap. This paper also provides an overview of traditional gender issues such as descriptive and prescriptive stereotypes. In the end, the findings of this paper will provide recommendations for further research.

**LITERATURE REVIEW**

Work is viewed in very different ways by men and women. Wage disparities, occupational sex segregation, and male-female authority gaps, for example, have all been well documented. Researchers studying gender inequality in the workplace have looked at several general elements such as hiring, promotions, wages, performance evaluations, and sexual harassment that contribute to gender discrepancy. According to a substantial amount of research, cognitive processes such as gender stereotyping and ingroup favouritism severely impede women's professional advancement opportunities. Multiple in-group and out-group biases make it difficult to appraise underrepresented groups fairly. Male supervisors are more inclined to offer

consistent evaluations to male employees. Still, they have a harder difficulty judging the performance of female employees, and they prefer to pay males more than females who are equally competent (Jung, Lippényi and Mun, 2021). Due to gender stereotypes presenting women as less aggressive and analytical than men, women are commonly underestimated for careers that require strategic and autonomous decisions.

With the help of cognitive psychologists, researchers have further distinguished between stereotypes as descriptive and prescriptive gender stereotypes. Rigid stereotypes concern opinions about characteristics that one gender should possess, whereas descriptive stereotypes discuss beliefs about factors that one gender should not have (Burgess and Borgida, 1999; Alkadry and Tower, 2011). The belief that women 'should' be nurturing, for example, is prescriptive, but the belief that women 'will' be nurturing is descriptive. As a result of assumed gender disparities, women and men think and act differently (Burgess and Borgida, 1999; Alkadry and Tower, 2011). According to cognitive psychologists, the nature of stereotypes can lead to bias in various ways. Descriptive stereotyping should be understood as discrimination when the features associated with a stereotype are incompatible with the traits necessary for the job or activity at hand, for example (Bobbitt-Zeher, 2011). As a result, women in male-dominated occupations are more vulnerable to discrimination and often face challenges in taking top positions.

Further to explain this, research in articles has stated that stereotypes cause a challenge for women when there is a perceived incompatibility of a woman's attributes with the characteristics necessary for success in traditionally masculine occupations and organisational positions (Bansak, Graham and Zebedee, 2012). Many male gender-typed occupations, such as top management and executive positions, are perceived as requiring stereotypically masculine characteristics but not feminine (Heilman, 2012; Wilcox et al., 2021). And it appears that changing one's opinion is difficult. Despite the reality that interpersonal skills and the ability to develop new talent are increasingly regarded as leadership and management capabilities, the notion of what it takes to succeed in these occupations is still mostly dependent on agentic skills (Heilman, 2012). Nevertheless, they are considered to have goal-oriented aggression and emotional fortitude that runs counter to popular perceptions of women (Heilman, 2012). As a result, women are seen as deficient in the characteristics required for success in top management roles, and they are often prevented from exercising leadership.

Moving forward, researchers have found that women experience a persistent salary disadvantage throughout their careers. Even though obstacles to women's access to higher-paying occupations and development within professions contribute to the total gender wage gap, women are paid less than men in the same businesses (Sorkin, 2017). Even when women use measures associated with greater remuneration and career development, such as transferring jobs or leveraging external offers to raise income with current employers, they do not get the same results as men (Belliveau, 2012; Trevor, Reilly and Gerhart, 2012). Managers are likely to assume that women are less agentic than communal (i.e., focused on connection to others) than men are and that men are more agentic and focused on pay than on relationships due to pervasive gender stereotypes (Belliveau, 2012; Sorkin, 2017). As a result, women continue to be underpaid and are frequently forced to engage in negotiating circumstances with minimal effects.

Furthermore, past research states that even when women go to higher positions to get equal pay after overcoming difficulties, they continue to encounter discrimination owing to preconceptions and struggle to maintain a healthy work environment. One of the causes for the wage gap and the paucity of women in high-level positions is this. Only 17% of Fortune 500 board seats, 15% of executive jobs, and 8% of topearner posts are held by women (Alkadry and Tower, 2011; Leslie, Manchester and Dahm, 2017; Frear et al., 2018). Women are only underrepresented at organisations' upper ranks, where they make up a tiny fraction of the workforce (Frear et al., 2018). Nonetheless, the gender composition of the upper classes is extremely visible, both internally and internationally, and different opinions are critical at this level; senior leaders' decisions have a greater impact than those made at lower levels (Leslie, Manchester and Dahm, 2017). When these two forms of inequality are considered together, the study shows that they are interdependent, posing a collective problem for women. To summarise the preceding discussion, related research leads to the following propositions;

**Research Proposition 1:** As women strive to ascend to higher positions, the gender gap grows as potential has a moderate impact on authority distribution.

**Research Proposition 2:** As women ascend the pay scale, the pay difference worsens, showing the existence of vertical remuneration segregation.

**Research Proposition 3:** As women ascend the pay scale, discrimination worsens, showing the existence of vertical remuneration segregation.

**METHODOLOGY**

Academic publications have used three different methodologies to investigate the elements that contribute to the pay disparity and the assignment of greater authority. Quantitative analysis, qualitative analysis and mixed methods were used, each with its own analysis methods. As a result, clear evidence of the determinants of inequity mentioned in this work is provided. Quantitative analysis was utilised in seven of the fifteen journal publications, qualitative research in four, and mixed techniques in the other four.

**Quantitative Analysis:**

Quantitative analysis helps understand behaviour that employs mathematical and statistical modelling, measurement, and research. As a result, numerical data is crucial in analysing the data and samples acquired. Researchers from the gathered academic journals utilised an online survey instrument for a questionnaire with an average of 35 questions to grasp better the topic of gender pay gap discrepancy and allocation of higher authority (Alkadry and Tower, 2011; Bansak, Graham and Zebedee, 2012; Leslie, Manchester and Dahm, 2017; Frear et al., 2018). Researchers took a few measures to perform the research. The first step was used to determine the dimensions of the structure that will be used. In the second step, a pool of connected components was formed, which was then used in the survey procedures. Employees from various employment areas were chosen for the second step, and the survey link was delivered to them through an email. A wide sample of workers from important professional associations, employees from Fortune 500 business offices, and graduates from large universities were selected for the study and the poll had an average response rate of 782 employees (Alkadry and Tower, 2011; Belliveau, 2012; Heilman, 2012; Bansak, Graham and Zebedee, 2012; Leslie, Manchester and Dahm, 2017; Frear et al., 2018; Scarborough, Lambouths and Holbrook, 2019).

The chosen participants were from various age groups and classifications, which aided the researchers in analysing the wage discrepancy and assignment of authority in different employment sectors. In addition, participants who were retired, unemployed, or working in an unpaid position/internship were excluded at the time of data collection from the final sample because these occupational circumstances were either outside the scope of the study or were temporary phases that would introduce errors in the analysis (Alkadry and Tower, 2011; Belliveau, 2012; Heilman, 2012; Bansak, Graham and Zebedee, 2012; Leslie, Manchester and Dahm, 2017; Frear et al., 2018; Scarborough, Lambouths and Holbrook, 2019). Given the subject's sensitivity, the next stage was to design the appropriate set of questionnaires, taking into account ethical and unethical concerns while attempting to obtain acceptable answers to the questions and gathering data for a final review.

Gender, geographic location, wage scale, and agency type of respondents were compared to the same variables in the sample frame to examine the amount of bias (Alkadry and Tower, 2011; Belliveau, 2012; Heilman, 2012; Bansak, Graham and Zebedee, 2012; Leslie, Manchester and Dahm, 2017; Frear et al., 2018; Scarborough, Lambouths and Holbrook, 2019). Regression analysis was utilised to estimate the associations between the dependent variable and the reach of an outcome based on the huge number of answers and predictors obtained. The link between respondents' attributions of inequality and their support for workplace diversity was examined using this methodology. Finally, a path analysis was utilised to forecast the direct and indirect repercussions of inequality and gender pay (Alkadry and Tower, 2011; Belliveau, 2012; Heilman, 2012; Bansak, Graham and Zebedee, 2012; Leslie, Manchester and Dahm, 2017; Frear et al., 2018; Scarborough, Lambouths and Holbrook, 2019).

**Qualitative Analysis:**

Qualitative analysis is effective for non-numerical data because it allows researchers to acquire data from different sources. Researchers from the gathered publications conducted an average of 35 in-depth interviews to understand the complex phenomena and provide light on gendered roles' experiences, patterns, processes, and context. Purposive sampling was used to recruit all interviewees on a voluntary and confidential basis in response to emails, word of mouth, and recommendations (Bobbitt-Zeher, 2011; Sorkin, 2017; Bishu and Headley, 2020; Jung, Lippényi and Mun, 2021). The interviews were semistructured, with open-end questions and probes covering many research topics (Bobbitt-Zeher, 2011; Sorkin, 2017; Bishu and Headley, 2020; Jung, Lippényi and Mun, 2021). The study focused on respondent responses that were impacted by workplace gender relations. This included, but was not limited to, responses about unique workplace experiences attributed to gender, the effect of having more women in the workplace, differences in workplace experiences between men and women, internal challenges faced by women, gendered reasons for career choices or path, and how the experiences of women in their profession could be improved (Bobbitt-Zeher, 2011; Sorkin, 2017; Bishu and Headley, 2020; Jung, Lippényi and Mun, 2021).

Voice recordings were used to collect interview data and written notes in cases where respondents declined to be recorded, both of which resulted in written transcriptions. Face-to-face interviews were the norm, but some

were conducted online. Interviews lasted, on average, 60 minutes, ranging from 45 to 120 minutes (Bobbitt-Zeher, 2011; Sorkin, 2017; Bishu and Headley, 2020; Jung, Lippényi and Mun, 2021). An iterative and multistep technique used deductive and inductive approaches to analyse the qualitative data. The data were coded line by line after the transcripts were collected, using open coding that evolved from the text and a priori codes established from the research questions and literature. The codes were later split into comparable categories to construct early categorisations and find correlations and connections. Finally, thematic analysis was utilised to find and evaluate broader patterns in the data, which were identified as themes that provided thorough descriptions of the data.

(Bobbitt-Zeher, 2011; Sorkin, 2017; Bishu and Headley, 2020; Jung, Lippényi and Mun, 2021)

### **Mixed Method Analysis:**

Mixed method analysis is useful in merging data from several sources or types. It combines quantitative and qualitative research methods to understand the research better. In the collected articles, an average of 45 cases of gender discrimination encountered by women were examined. A discrimination narrative and a discriminatory experience with an employee organisation were designed to investigate the situations. Based on the materials in each case file, the produced narrative was a summary of "WH" questions (What, when, why, etc.) of discrimination (Bobbitt-Zeher, 2011; Trevor, Reilly and Gerhart, 2012; Castagnetti and Rosti, 2013; Wilcox et al., 2021). A descriptive analysis was conducted to summarise the data obtained from the collected case studies, then coded to determine the pattern (Bobbitt-Zeher, 2011; Trevor, Reilly and Gerhart, 2012; Castagnetti and Rosti, 2013; Wilcox et al., 2021).

A semi-structured interview with 15 applicants who had been involved in the considered cases of gender discrimination was undertaken to get insight into the case answers (Bobbitt-Zeher, 2011; Trevor, Reilly and Gerhart, 2012; Castagnetti and Rosti, 2013; Wilcox et al., 2021). Content analysis was utilised to establish the in-depth meaning of responses, coded in a linear sequence for the information acquired. The coding categories obtained from text data were examined using standard qualitative content analysis. Furthermore, data was acquired from an employee wage database for which quantitative analysis was performed. This also aided researchers in evaluating business and establishment-level information from employers on employment patterns by gender, race, and ethnicity, allowing them to understand the discrimination gap better.

(Bobbitt-Zeher, 2011; Trevor, Reilly and Gerhart, 2012; Castagnetti and Rosti, 2013; Wilcox et al., 2021)

### **FINDINGS**

An average was calculated from the data collected from the chosen articles using the discussed methodologies. It was found that male respondents earned an average of \$80,700 a year while female respondents earned \$60,000, resulting in a pay difference of \$20,700. Male respondents had an average of 25 subordinates, whereas female respondents had an average of 11 subordinates, which was less than half of what their male counterparts had. Male respondents were in charge of an average annual procurement volume of \$200 million. In contrast, female respondents were in charge of an average yearly procurement volume of \$95 million, again less than half of what their male counterparts were in charge of. The findings reveal a wage and authority disparity between male and female employees. When authority factors for men and women are taken into account, the difference becomes significantly greater. Four variables, yearly procurement volume, number of subordinates, number of agency workers, and number of years with an employer, were converted before being put into the regression model to address the skewness of the data.

(Alkadry and Tower, 2011; Bobbitt-Zeher, 2011; Trevor, Reilly and Gerhart, 2012; Belliveau, 2012; Bansak, Graham and Zebedee, 2012; Heilman, 2012; Castagnetti and Rosti, 2013; Leslie, Manchester and Dahm, 2017; Frear et al., 2018; Scarborough, Lambouths and Holbrook, 2019; Wilcox et al., 2021).

It is essential to note that the study had some significant limitations, such as the lack of a follow-up survey addressing the responses, leaving the employees' long-term status uncertain. People who were underpaid or jobless for a short period were thus omitted from the evaluation. Second, a significant lack of data from organisations resulted in limited data availability. Although it is believed that pay grade in research models captures the needed data, there is no measure for employment tenure. These omitted factors would be included in the residual within-job pay gap to the degree they influenced estimates.

These model flaws are troublesome for interpreting within-job discrimination. Still, it's worth noting that these measurement concerns affect both masculine and gender-neutral organisations, so they're less likely to influence between-organization comparisons.

**CONCLUSION**

Gender influences women's pay indirectly by altering the quantity of women's authority and the direct consequence of power on one's income. While wages are driven by authority level and gender, authority level is driven by gender. Hence gender has an indirect influence in forecasting pay through authority factors. The indirect influence on revenue via the intervening authority factors was almost comparable to this research's direct effect on income. As a result, future research on the impact of gender in forecasting salary inequalities between men and women will need to consider indirect effects.

The findings in this paper raise the possibility that authority factors are masking another dimension of inequality. Women can acquire greater levels of authority, but based on the study of mean differences, they are likely to oversee less than half as many people and control less than half the money as their male counterparts due to the stereotype that has been formed against them. In other words, while women work hard and pay a significant price to breach the inequity barrier by achieving higher-level jobs, they are confronted with a new, more subtle barrier that limits the amount of authority given to them, resulting in lower pay.

These findings have two outcomes. First, researchers should account for indirect impacts of gender on pay in future studies of wage drivers and gender's effect on these factors, that is, how much of the effect of the authority factors is driven by gender. This will help researchers better grasp the real influence of gender on women's salary and the gap in authority, which is driven primarily by gender rather than experience or other human capital determinants, as revealed in this study. Gender must be viewed as such since it is at the foundation of the inequality at authority levels. Women and men must have gender equality in the amount of power and authority entrusted to them if an organisation aspires to be representational.

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**A STUDY ON CONSUMER PERCEPTION TOWARDS PROMOTION OF ECO FRIENDLY PRODUCTS****Dr. Deepa Shivaji Jamindar**

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**ABSTRACT**

*Within the field of ethics and social responsibility environmental and green marketing topics are the central topics, which are closely related to biodiversity and sustainability. This paper study consumer perception towards Green promotion and suggest measures to make green promotion more effective.*

**INTRODUCTION**

The concept of green marketing has come into existence in response to the growing concern over environmental degradation. The deterioration of the ecology is a major global concern. There is growing concern about the greenhouse gases in the environment due to the burning of fossil fuels, about the depletion of ozone layer due to certain chemicals and global warming. Environmentalists in India and abroad are voicing their concern and are campaigning against pollution causing industries.

Green promotion means promoting eco-friendly products. In green promotion marketers communicate with consumers through advertisement environment friendly benefits of products. Green advertising message helps the company to face competition with non green products. It is found that only 5% of the marketing messages from "Green" campaigns are entirely true and there is a lack of standardization to authenticate these claims. There is no standardization to authenticate these claims. There is no standardization currently in place to certify a product as organic. Unless some regulatory bodies are involved in providing the certifications there will not be any verifiable means. A standard quality control board needs to be in place for such labelling and licensing

**LITERATURE REVIEW**

1. **Aditi Jaju (August, 2016)** in his thesis on "A study of the impact of Green Marketing on Consumer Purchasing Patterns and Decision making in Telangana, India analyzed that there is a positive relationship between green branding and packaging and the environmental behavior of consumers. The first key finding was the perception of green packaging and branding has a significant and positive effect on the environmental behavior of consumers.
2. **Magaali Morel (2012)** in her thesis on "Green Marketing: Consumers' attitudes towards eco-friendly products and purchase intention in the Fast Moving Consumer Goods (FMCG) sector" revealed that consumers really seem influenced by previous satisfaction, advertising and word of mouth communication.
3. **Jacquelyn A. Ottman** in her article "How to Avoid Green Marketing Myopia" stated that Ottman suggested that green marketing myopia can be solved by educating consumers with marketing messages that connect environmental products attributes with desired consumer value.
4. **John Rooks** in his article "The green Market Niche: Being Green Going Mainstream" stated that Messages in eco friendly advertisement must be deeper, attractive and easy to understand for consumers.

**OBJECTIVES OF THE STUDY**

- To study consumer perception towards Promotion of eco-friendly products.

**HYPOTHESIS**

- **H<sub>0</sub>**: There is no significant different (relationship) between Green Promotion and consumer perception towards green FMCG goods.

vs.

- **H<sub>1</sub>**: There is a significant different (no relationship) between Green Promotion and consumer perception towards green FMCG goods.

**RESEARCH DESIGN**

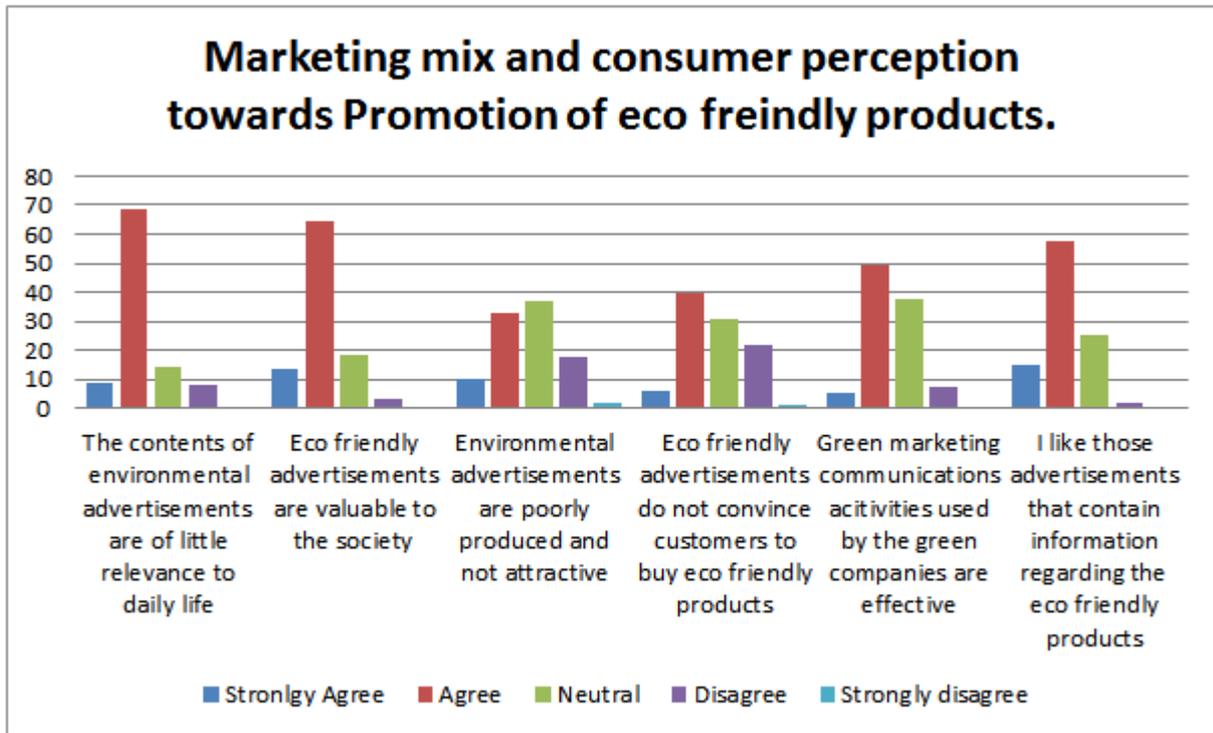
The design of present research is diagnostic in nature. In this research researcher tries to find out of relationship between Green Promotion and Consumer Perception towards Green FMCG Goods. Survey is conducted through a structured questionnaire.

Different statements based on Green Promotion are evaluated. This part consists of 6 statements. These statements were measured by using five point likert scale i.e strongly agree (5), agree (4), Neutral (3), disagree (2) and strongly disagree (1).

**SAMPLING PROCEDURE**

The studies incorporate 1049 consumers who are aware and watch environmental friendly advertisement located in Mumbai City. This research paper is based on primary data. Relevant and reliable data will be collected from various journals, government periodical, etc. A good amount of information can be collected through reference books, published and unpublished reports, management journals etc. Updated information can be gathered through genuine websites.

**Data Collected and Analysis**



**Table No. 4.33:** Respondents Perceptions towards Green Promotion

Marketing mix and consumer perception towards Green Marketing (Green Promotion)						
		Strongly Agree	Agree	Neutral	Disagree	Strongly disagree
The contents of environmental advertisements are of little relevance to daily life	Frequency	91	717	152	86	3
	Percent	8.7	68.4	14.5	8.2	0.3
Eco friendly advertisements are valuable to the society	Frequency	146	677	194	32	0
	Percent	13.9	64.5	18.5	3.1	0.0
Environmental advertisements are poorly produced and not attractive	Frequency	108	345	388	189	19
	Percent	10.3	32.9	37.0	18.0	1.8
Eco friendly advertisements do not convince customers to buy eco friendly products	Frequency	67	416	320	229	17
	Percent	6.4	39.7	30.5	21.8	1.6
Green marketing communications activities used by the green companies are effective	Frequency	56	517	393	77	6
	Percent	5.3	49.3	37.5	7.3	0.6
I like those advertisements that contain information regarding the eco friendly products	Frequency	158	606	264	21	0
	Percent	15.1	57.8	25.2	2.0	0.0

1. 68.4% respondents were agreed that the contents of environmental advertisements are of little relevance to daily life
2. 64.5% respondents were agreed that eco friendly advertisements are valuable to the society.
3. 37% respondents were neutral that Environmental advertisements are poorly produced and not attractive.
4. 39.7% respondents were agreed that Eco friendly advertisements do not convince customers to buy eco friendly products
5. 49.3% respondents were agreed that Green marketing communications activities used by the green companies are effective.
6. 57.8% respondents were agreed that they like those advertisements that contain information regarding the eco friendly products.

**Kolmogorov-smirnov Z value of Green Promotion**

<b>Green Promotion</b>		
	<b>Kolmogorov-Smirnov Z</b>	<b>Asymp. Sig. (2-tailed)</b>
The contents of environmental advertisements are of little relevance to daily life	12.771	0.000
Eco friendly advertisements are valuable to the society	11.299	0.000
Environmental advertisements are poorly produced and not attractive	6.481	0.000
Eco friendly advertisements do not convince customers to buy eco friendly products	7.889	0.000
Green marketing communication activities used by the green companies are effective	9.459	0.000
I like those advertisements that contain information regarding the eco friendly	10.055	0.000

Above data analysis shows that p-value < 0.05, hence we reject H<sub>0</sub> and conclude that there is a significant difference (no association) between Green promotion and consumer perception towards Green FMCG Product.

All the above statements are analyzed to understand the consumer perception towards green promotion. From the analyzed data it is concluded that majority of consumers agreed that environmental advertisement are valuable to society but not convincing the consumers to buy eco –friendly products.

**CONCLUSION**

Green marketing is not going to be an easy concept. The firm has to plan and then carry out research to find out how feasible it is going to be. Green marketing has to evolve since it is still at its infancy stage. Marketers have the responsibility to make the consumers understand the need for and benefits of green products as compared to non-green ones and the benefits they can reap in the future.

Companies producing green products need to highlight the functional benefits of green products in their promotional campaign. Personal selling is also one the way to communicate about the benefits of green products to consumers directly. Salesmanship also helps to show demo of the green products and to solve consumers query immediately.

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**MEASURING CONSUMER PERCEPTION OF THE QUALITY OF HEALTH CARE SERVICE PROVIDED BY GOVERNMENT HOSPITALS IN MUMBAI: A CASE STUDY OF BHAGWATI HOSPITAL, MUMBAI**

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**ABSTRACT**

*Healthcare is a dynamic sector which requires considerable amount of interpersonal interaction between the provider and seeker of care. Government hospitals, some of which are among the best hospitals in India, provide treatment at taxpayer expense. The purpose of this study is to measure consumer perception of the quality of services provided by Government hospitals in Mumbai. The study includes the perception of patients who approached Bhagwati hospital for medical treatment. This research paper develops a measure of service quality gap through the SERVQUAL model and contributes towards understanding the relationship among overall patient satisfaction, and service quality attributes. Based on the findings, the paper suggests strategic actions for meeting the needs of the patients of health care sector more effectively. The paper draws the attention of health policy makers in considering the requirements and opinions of patients to effect substantial change and significant improvement in the quality of the health care services for better and increased utilization of the services. The paper fulfils the need of measuring perceived quality of health care services and points out that the improvement in health care services requires immediate and urgent attention from policy makers.*

*Keywords: Healthcare, patient satisfaction, SERVQUAL scale, gap analysis.*

**INTRODUCTION**

Healthcare in India features a universal health care system run by the constituent states and territories of India. Healthcare is a dynamic sector which requires considerable amount of interpersonal interaction between the provider and seeker of care. This makes it crucial to review the perception and satisfaction of the patients (care-seekers) with regards to the provision of healthcare services. Government hospitals, some of which are among the best hospitals in India, provide treatment at taxpayer expense. Most essential drugs are offered free of charge in these hospitals. Government hospitals provide treatment either free or at minimal charges.

**OBJECTIVES**

The study aims to evaluate the service quality at Bhagwati hospital in Mumbai through SERVQUAL scale and identify important service dimensions for performance improvement.

**REVIEW OF LITERATURE**

The strategy for patient satisfaction in health care service requires effective marketing plans, policies, and practices to genuinely meet the needs of different strata of population (Mac Alexander et al. 1993). This concept drew the attention of the service providers in the early 70s and the health care providers in advanced countries became conscious of satisfying patients (Cooper et al. 1979; Kotler and Zaltman, 1970; Zaltman and Vertinsky, 1971; Woodside et al. 1989 and Hexner et al. 1985). The major reasons that have necessitated a shift towards marketing approach are intense competition, more patient awareness, increased purchasing power of patients, and availability of specialists (Yadav, 1993). Service quality has become an important research topic in view of its significant relationship to costs (Crosby, 1979), profitability (Buzzell and Gale, 1987; Rust and Zahorik, 1993; Zahorik and Rust, 1992), customer satisfaction (Bolton and Drew 1991; Boulding et al, 1993), customer retention (Reichheld and Sasser, 1990), and service guarantee (Kandampully and Butler, 2001). Service quality has also become recognized as a driver of corporate marketing and financial performance (Buttle, 1996). Service quality affects customer satisfaction. A popular definition of service quality proposed by Berry et al. (1988) is 'conformance to customer specifications'—that is, it is the customer's definition of quality that matters, not that of management. Evans and Lindsay (1999) proposed the view that customer satisfaction results from the provision of goods and services that meet or exceed customer needs. Although it is widely acknowledged that there is a need for quality indicators of patient satisfaction with medical care, very little research in this area exists (Berman-Brown and Bell, 1998). Service quality is described as "the ability of a service in providing customer satisfaction related to other alternatives" (Bojanic, 1991. P.28). According to the disconfirmation paradigm in the services marketing literature (Sasser, Olsen & Wyckoff, 1978; Lewis & Booms, 1983; Lehtinen & Lehtinen, 1985; Gummesson & Grönroos, 1988; Brown & Swartz, 1989; Grönroos, 1990; Parasuraman, Zeithaml & Berry, 1994), service quality is the gap between consumer's perceptions of service performance and level of expectations. The outcome of this process is negative disconfirmation (performance rated below level of expectations), positive disconfirmation (performance evaluated above level of

expectations) or confirmation (performance equal to expectations level). In the health care environment, consumer's perceptions can be considered as the patient's evaluation of specific hospital service attributes relative to his/her expectations. Expectations, in the service quality literature, are not viewed as normative expectations (Miller, 1977; Swan & Trawick, 1980; Prakash, 1984) or what the patient believes should be offered, but rather are seen as what the patient believes would be offered in a health care service product. Several studies indicate that a lower priority is placed on patients' non-clinical expectations of service quality. Carson et al. (1998) have stated that some professionals contend that consumers' perception of quality service in health care is distorted due to the inability of patients to judge the technical competence of the medical practitioner with any accuracy. Since patients are often unable to assess the technical quality of medical services accurately, functional quality is usually the primary determinant of patients' perceptions of quality (Donabedian, 1980, 1982). There is growing evidence to suggest that this perceived quality is the single most important variable influencing consumers' perceptions of value, and that this, in turn, affects their intention to purchase products or services (Bolton and Drew, 1988; Zeithaml, 1998).

### RESEARCH METHODOLOGY

An initial exploratory research was done by the researchers using secondary data and case studies to identify the important factors for customer perceptions of service quality that may be included in the questionnaire. A detailed questionnaire was designed on the basis of the exploratory study for the purpose of this descriptive study. Primary data on the customers' perceptions of quality of services was collected through the structured questionnaire. The questionnaire for the primary survey was based on the SERVQUAL scale. In the SERVQUAL instrument, 22 statements measure the performance across these five dimensions namely Tangibles (1-4), Reliability (5-9), Responsiveness (10-13), Assurance (14-17), Empathy (18-22) using a seven point likert scale measuring both customer expectations and perceptions (Gabbie and O'Neill, 1996). It is important to note that without adequate information on both the quality of services expected and perceptions of services received then feedback from customer surveys can be highly misleading from both a policy and an operational perspective. In the following, the application of SERVQUAL approach is more specified with a case of Bhagwati Hospital. Further analysis of the data is done for achievement of the research goals through the use of Statistical software SPSS 21.0.

### Sample Design and Data Collection

The study presents the 'patient' perception on healthcare services quality on a sample population. The study is based on primary information collected through structured questionnaire from 350 randomly selected respondents who were either the patients themselves or their relatives were the patients of Bhagwati hospital. Out of 350, only 240 questionnaires filled in personally by the respondents and were returned, resulting in a 69 per cent response rate. The respondents visited Bhagwati Hospital during April 1, 2021 to December 31, 2021. The problem of incorrect judgement was taken care of in the present study as only regular and experienced patients were contacted. The data so collected from the patients were clubbed together for analysis.

### SERVQUAL Methodology

Clearly, from a Best Value perspective the measurement of service quality in the health service sector should take into account patient's expectations of health service as well as perceptions of service. However, as Robinson (1999) concludes: "It is apparent that there is little consensus of opinion and much disagreement about how to measure service quality". One service quality measurement model that has been extensively applied is the SERVQUAL model developed by Parasuraman et al. (1985, 1986, 1988, 1991, 1993, 1994; Zeithaml et al., 1990). SERVQUAL as the most often used approach for measuring service quality has been to compare customers' expectations before a service encounter and their perceptions of the actual service delivered (Gronroos, 1982; Lewis and Booms, 1983; Parasuraman et al 1985). The SERVQUAL instrument has been the predominant method used to measure consumers' perceptions of service quality. It has five generic dimensions or factors and are stated as follows (van Iwaarden et al., 2003):

- (1) **Tangibles:** Physical facilities, equipment and appearance of personnel.
- (2) **Reliability.:** Ability to perform the promised service dependably and accurately.
- (3) **Responsiveness:** Willingness to help customers and provide prompt service.
- (4) **Assurance (including competence, courtesy, credibility and security):** Knowledge and courtesy of employees and their ability to inspire trust and confidence.
- (5) **Empathy (including access, communication, understanding the customer):** Caring and individualized attention that the firm provides to its customers.

Initially scale reliability is calculated and details are presented in the following table.

**Scale Reliability: Cronbach’s alpha values**

**Table 1**

Dimension	Expectation	Perception
Tangibles	0.792	0.822
Reliability	0.825	0.791
Responsiveness	0.888	0.870
Assurance	0.732	0.765
Empathy	0.788	0.921
Overall	0.732	0.793

It is observed that all Cronbach’s alpha values are > 0.7 indicates that above scale has good reliability.

**Key Messages from Questionnaire Survey**

The following tables shows the background of the respondents

**Cross tabulation of Gender and Age of the Respondents**

**Table 2**

		Age(Years)						
		15-24	24-34	35-44	45-54	55-64	65-74	Total
Gender	M	30	5	5	30	10	25	105
	F	45	45	10	15	15	5	135
Total		75	50	15	45	25	30	240

Female respondents (135) are more than male respondents (105). Majority of respondents are from age group 15-24

**Education and Income Level of the Respondents**

**Table 3**

Education	No. of Respondents	Income	Number
Illiterates	75	Less than 2000	30
Primary	90	2000-4000	80
Secondary	75	4000-6000	60
Total	240	6000-8000	70
		Total	240

As it is government hospital majority of respondents are with primary education. Highest income group is 2000-4000 per month.

Most of the respondents are factory workers, domestic servants, peons, and drivers or are working with the courier service.

**SERVQUAL scores for health services**

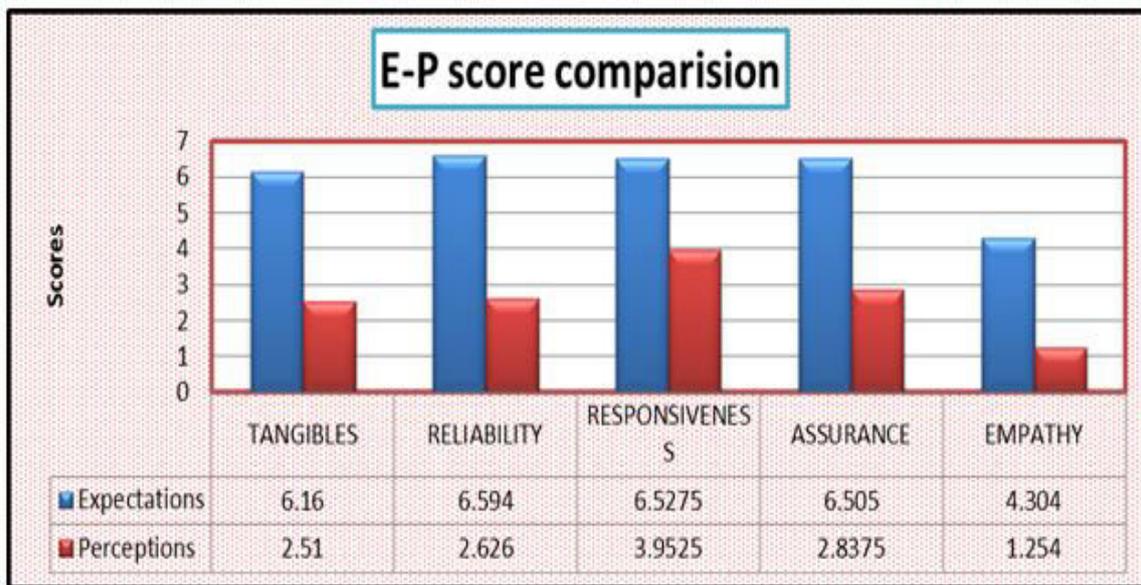
**Table 4**

Dimension	Expectations	Perceptions	Gap scores	Weightings	Weighted average
Tangibles	6.16	2.51	-3.65	20.3	-0.74095
Reliability	6.594	2.626	- 3.968	29.7	-1.178496
Responsiveness	6.5275	3.9525	- 2.575	19.2	-0.4944
Assurance	6.505	2.8375	-3.6675	15.7	-0.575797
Empathy	4.304	1.254	-3.05	15.1	-0.46055
					$\Sigma$ -3.450

From the above Table it is observed that all questionnaire responses were negative except one and an overall weighted SERVQUAL score of -3.450 were recorded, indicating a significant shortfall in meeting patient’s expectations across all service areas and dimensions. The summary scores for each dimension are shown in Table 3, with the weighted average scores per dimension having been totaled to achieve the overall SERVQUAL score. As can be seen from Table 3, the highest gap scores were for reliability and assurance; this is real cause for concern and provides a definite starting point for service improvements. The results indicate

that the patient expects most from the reliability dimension of the health service. The relatively low importance of empathy could be attributable to the fact that patients are aware of the financial constraints which are typical in the local authority funding context, and simply do not expect much when it comes to aesthetics. Patients allocated to empathy the lowest weighting, indicating it to be of least importance to them, yet they expect most from this service dimension. This apparent anomaly is probably due to the fact that patients expect staff to be knowledgeable about the service and therefore they can see no reason for this dimension not to be achieved. It is assumed that for this reason, customers have weighted this dimension lowest. Graph 1 makes this picture much clearer.

Graph 1



**Hypothesis Testing:**

To find significant difference in mean expectation and mean perception score following null hypothesis and alternative hypothesis were proposed and tested.

Null Hypothesis: Mean Expectation score is significantly less than or equal to Mean Perception score.

Alternative Hypothesis: Mean Expectation score is significantly greater than Mean Perception score.

Initially data was tested using Shapiro- Wilk test of normality and found that data is not normally distributed (p<0.001). Hence for testing above null hypothesis, non – parametric Wilcoxon Rank test is used ( p <0.001). Therefore, null hypothesis is rejected. We reveal that Mean Expectation score is significantly greater than Mean Perception score. This finding is matching with above interpretation of gap analysis.

**Limitations of the Study**

Any study based on consumer survey through a pre-designed questionnaire suffers from the basic limitation of the possibility of difference between what is recorded and what is the truth, no matter how carefully the questionnaire has been designed and field investigation has been conducted. This is because the consumers may not deliberately report their true preferences and even if they want to do so, there are bound to be differences owing to problems in filters of communication process. The error has been tried to be minimized by conducting interviews personally yet there is no full proof way of obviating the possibility of error creeping in. As the study was to be completed in a short time, the time factor acted as a considerable limit on the scope and the extensiveness of the study. The information provided by respondents may not be fully accurate due to unavoidable biases.

**CONCLUSION**

This research offers the following important insights.

- An overall weighted SERVQUAL score of **-2.5287** were recorded, indicating a significant shortfall in meeting patient’s expectations across all service areas and dimensions.
- The highest gap scores were for Reliability and Assurance; this is real cause for concern and provides a definite starting point for service improvements. As can be seen from the results, the patient expects most from the Reliability dimension of the health service.

- Patient gives relatively low importance to empathy.
- Patients also allocated to empathy the lowest weighting, indicating it to be of least importance to them, yet they expect most from this service dimension.

The paper draws the attention of health policy makers in considering the requirements and opinions of patients to effect substantial change and significant improvement in the quality of the health care services for better and increased utilization of the services. The paper fulfils the need of measuring perceived quality of health care services and points out that the improvement in health care services requires immediate and urgent attention from policy makers.

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**DOCTRINES UNDER COPYRIGHT: BUILDING BLOCKS OF COPYRIGHT AS AN INTELLECTUAL PROPERTY****Dr. Rekha Sain<sup>1</sup> and Shrey Aggarwal<sup>2</sup>**<sup>1</sup>Assistant professor, Department of Commerce, Aggarwal College, Ballabgarh, Maharishi Dayanand University, Rohtak<sup>2</sup>4<sup>th</sup> Year law student, The ICFAI University, Dehradun**ABSTRACT**

*The objective of the law of copyright is to defend initially made works from being purloined. This insurance is to empower capacity and accordingly the proceeded with production of late works which can preferably be made open to the general public. Innovation is that essential measuring stick used by the systems of copyright all over the planet to decide the security of copyright to a particular work. Segment 13(1) of the Indian Copyright Act 1957 gathers that copyright remains alive in "unique artistic, sensational, melodic and imaginative works". The Act, in any case, makes no choose to framework or consider a piece's creativity. This surrenders it to the court to come to a choice on what extent of innovation is significant would like for a piece to be lined by copyright insurance. There region unit various legitimate speculations that apply to various region of the law, as well as the accompanying: - • Doctrine of Merger*

- Tenet of Sweat of the forehead
- Smidgen of inventiveness

*With the accessibility of these tenets the courtroom can undoubtedly give the necessary assurance to the needful.*

*Keywords: Original, protection, copyright*

**INTRODUCTION**

The law of copyright safeguards people UN organization produce unique works. The maker of the work is conceded bound selective freedoms beneath this regulation concerning duplicate right, that incorporates a confined length. property holders of copyrights have the position to manage anyway their work is changed, adjusted, altered, or generally modified to frame one thing new. people that own works that square measure copyright qualified square measure conceded assortment of privileges, as well as the ability to raise or market the main work. property holders of copyrights may also publically perform or show their works, or they will allow others authorization to attempt to do in this way. They even reserve the privilege to attribution, that expresses that assuming their work is utilized somewhere else, it ought to tend due credit. Copyright safeguards the overall population area through the creativity system so somebody could attest his unique assertion.

**Goals**

To illuminate people in regards to intellectual property regulation

To explain the fundamental would like principles of intellectual property regulation

To get IPR regulations everyday use

**SWEAT OF THE BROW**

As indicated by this thought, partner degree creator acquires freedoms by means of simple tirelessness while making a piece. The "sweat of the temple" philosophy depends totally on the creator's ability and work, preclusive the requirement for "imagination" inside the work. The instance of *Walter v. Path* (*Walter v Lane* [1900] A.C. 539), inside which partner degree oral explanation was word for word copied in a really news story, brought up the issue of whether such word for word duplicate would offer birth to copyright at spans the work. this thought was used for the essential time inside the uk. Be that as it may, the work ought not be a copy of another work. It should are exhorted by the creator. correspondence inquiries square measure unique inside the perspective of intellectual property regulations since they were composed by the authors. The court confirmed that the solicitor's copyright couldn't be granted exclusively because of a few inspectors asked relatively indistinguishable questions.

**Pinch OF CREATIVITY**

The origination of "innovation" has moved ideal models, moving from "sweat of the temple" to "speck of force." Courts have perceived creators' imaginative and abstract commitments since the late seventeenth hundred years. inside the instance of *crossbreed Publications, Inc. v. Provincial phone organization Co.*

(Regulation cornell, n.d.), the u. s. High Court completely dismissed this idea, holding that so concerning a piece to qualify as an inventive, it shouldn't exclusively exhibit a "smidgen of force," but moreover not be the consequences of independent creation. Creativity occurs in any work that has gotten a major degree of scholarly capacity and judgment, reliable with this conviction.

Albeit the level of involvement doesn't should be great, protecting copyright ought to be equivalent. the first essential legitimate issue was whether or not a set, similar to a telephone directory, is safeguarded by Copyright regulation. Individual realities, similar to names and addresses, don't appear to be safeguarded by copyright, predictable with the court, but data arrangements square measure. this is frequently due generally to the unmistakable philosophy of communicating one's thoughts through game plan, and on the off chance that it exhibits even the slightest bit of development, it'll be copyrightable. The Court all around that Rural's registry didn't satisfy the norms for copyright security since it totally was just a gathering of information coming up short on the fundamental amount of imaginative reasoning. Consequently, the case was laid-off.

### **DOCTRINE OF MERGER**

Notwithstanding the "sweat of the forehead" and "bit of force," the copyright system's most of the way to deal with the build of creativity, there's moreover the "consolidation" ism, that holds that copyright assurance is ineligible at whatever point the idea and in this way the articulation square measure essentially associated and consequently the articulation can't be recognized from the idea. Applying this contention, courts have declined to safeguard the statement of {an idea|a thought|a conception|a plan|an inspiration} that may exclusively be sent in manner|a method|a technique|a way} or terribly} extremely confined way because of doing consequently would concede the actual idea imposing business model. the essential United States of America Supreme Court case to explain this idea was Baker v. Selden (Case Briefs, n.d.), guaranteeing that exclusively a patent might give the elite freedoms to the "valuable workmanship" depict inside the book; copyright likely could be wont to safeguard the blueprint. however there's conflict among yank courts on whether the consolidation origination hinders copyrightability inside the first spot or is a guard to encroachment, it's generally pronounced as a safeguard to encroachment of copyright. for sure, the ism shares been utilized practically speaking regulation nations like Asian country inside the instance of Chancellor Masters of Oxford v. Narendra business venture business (Bananaip, n.d.) These numerical issues, steady with the Indian Supreme Court, square measure appearances of normal regulations. Such normal standards oft exclusively have various ways that to be sent because of language could be a limited medium.

Consequently, stretching out copyright security to inquiries would thwart people from getting to the thoughts they contain. this could overcome one among the underlying objectives of intellectual property regulation, especially the progression of force. Hence, the Court discovered that the inquiries weren't lined by copyright. For a truly while, Asian nation immovably stuck to the "sweat of the temple" reasoning. the quality for "creativity" utilized in Asian nation, in any case, is past the one utilized in England. The Supreme Court deserted the "Sweat of the Brow" ism in japanese Book Company v. D.B. Modak (Indian Kanoon, n.d.) and embraced the "Pinch of Creativity" technique that is utilized in the u. s.. the current trouble is whether or not decisions square measure restrictive. during this present circumstance, the idea of "taste of least interest of imagination" was presented. The Court gave the editors of SCC copyright assurance for their progressions and commitments. during a comparable vein, the Court confirmed that no copyright will be pronounced on court decisions and orders because of they're inside the property right and everyone has the freedom to distribute them and use.

### **CONCLUSION**

As outlined by the large number of convictions disclosed on top of, there's no single, brought together hypothesis of force. absolutely different|completely different} wards in a few countries have various necessities for peculiarity. The origination of creativity in intellectual property regulation is disconnected: from one viewpoint, it uses an expression that is prominently accepted to actually imply "new creation from nothing," but on the contrary hand, the law characterizes it as "starting from the creator and containing work, ability, and judgment." On a comparable to take note of, the origination of "consolidation," that alludes to things during which the language is respected to be inseparably gone head to head with the reasoning, has banished copyright security for works and explicit thoughts that may exclusively be valued in one or a confined scope of the manner. This has not exclusively kept essayists from claiming such renowned works, however it's also made them wide possible to clients and perusers. in addition, the consolidation speculation blocks the assurance of realities underneath intellectual property regulations.

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**SELF HELP GROUP FOR WOMEN EMPOWERMENT – A STUDY CONDUCTED IN MUMBAI SUBURB AREA****Dr. Caroline David<sup>1</sup> and Mr. Nimesh Jotaniya<sup>2</sup>**<sup>1</sup>Research Guide, (HOD Department of Economics at D.T.S.S. College of Commerce)<sup>2</sup>Research Scholar, (Assistant Professor at Thakur College of Science & Commerce)**ABSTRACT**

*India a developing nation, our GDP is at moderate pace even after seven decades of independence. Government is more focusing on rural development and its developmental activity. In many area women lead self-help group have made women more active and being them in decision making flow. Self-help group have become vibrant association of women for financial aids. SHG made important contribution to the development of women entrepreneurs and the development of the economy. The main objective of this study is to check empowerment of women through SHG and to study the prospects of family members, husbands of the respondents and officers related to the workplace and examine the impact of self-help respondent groups. In this primary data is collected through random sampling of 100 women who are participants of local SHG in suburb area of Mumbai district.*

**INTRODUCTION**

Most of the women have been relegated to the bottom of the society and many parts of the world are controlled by men due to social injustice, political and cultural systems because of this women empowerment have become a global challenge. As per the record about 65% of the poor of the world are women. Women plays important role not only for economics but also for non-economic activities.

Women are an important part of any economy for Nation development and growth. Women are seen as equal partners with men, development program. Women need effective empowerment in development programs. Economic empowerment is critical to achieving this sustainable development of society. Globally agreed UN treaties take binding legal and corrective action to repeal it all forms of discrimination against women, including measures against Violence against Women, Immediate Elimination women's rights, educational opportunities, health care, jobs Possibilities, wages and customs to insult women. For strengthening national women's policies, the government at the time was an important step for her in 2001 the goal of this policy is to ensure the empowerment of women through: Active economic and social policies for full development so that women can reach their full potential.

Empowering women in the development process has become a central focus of almost all development strategies and programmes. The development agency is currently very concerned about raising levels of empowerment so women can challenge their relationships family and society (Selvaraj and Kannusamy 2007) Empowerment is a concept that has become popular these days and describes the process of empowerment, obtaining benefits and opportunities for people in society. Empowerment is a process that enables people to increase awareness, increase action and control the quality of their lives. In other words, Empowerment changes lives and motivates people to compete for change based on ability.

**Self Help Group and its Progress in India.**

Self-help team is a system via which a grassroots group, especially for broad purposes, helps women in developmental matters such as savings, credit and income. SHGs are voluntary organizations of individuals formed to achieve group goals. The goal of SHG is to create addiction of saving, financial savings and banking subculture (getting mortgage and repaying the equal time in a given period), to ensure financial independence. The ideas behind self-help institutions are to finance the poorest of the poor, provide a light level of rehabilitation and achieve moderate empowerment. The idea of the self-help group is "For women, by girls and women". The beginning of the SHG is from the Grameen Bank of Bangladesh, which used to be set up with the aid of economist, Professor Muhammad Yunus of Chittagong University in the 12 months 1975. It was once mounted solely for the poor.

According to me, Self Help Organizations (SHG) and groups have helped women like small businesses. In recent years, newspapers have continued to report on such profitable investments. The examples are - In general, cultivation of vegetables in the soil, manufacture of ready-made clothes, integrated agriculture, horticulture and breeding, cultivation of medicinal plants, cultivation of mushrooms, potting, stone cutting, sheep breeding, salting, management in official workshops, tin products, tour vans, management centers of mechanical laundries, in total distribution station, etc Empowerment makes women dynamic participants in

the system of social change, beautifies their image, confronts injustice and inequality and develops skills. As a result, they will achieve great achievements control their lives. Although empowerment is highly desirable, it is currently not easily implemented due to many anti-social assessments. The need of every woman now does not lead to permanent changes. Organized and collective energy makes the community responsive and makes it as enjoyable as possible. The beginning of self-help agencies (SHGs) has been completed for mutual help in the Indian village community. Today, eco-friendly self-help groups (SHGs) are the most eco-friendly way to empower women especially at the root level. Women have shown extraordinary mobility in planning labor force activities to promote higher incomes, greater bargaining power and exceptional lives. To meet the needs of women, these SHGs are included in the designated banking system. A lot of research has been done in the field of women's empowerment. However, women working in the informal sector ignore the prominence of women, gender issues, participation in labor pressure, social, economic, political, secular and educational factors. Entries for women, one type of caste class, will no longer be analyzed. Therefore, the modern-day find out about suggests that via self assist women empowerment in a number of social categories.

### **OBJECTIVES OF STUDY**

The main objective of this paper is to investigate the empowerment of women through self-help organizations in different social categories. To examine the impact of self-help organizations on family members, male respondents of the sample and relevant authorities at the request and helpers of the sample.

### **ANALYSIS AND INTERPRETATIONS**

The present findings relate to the economic empowerment of women in suburban Mumbai. This activity is implemented by SHG for financial upliftment of women. There are 8 SHGs with 200 participants working in the studied territory. One hundred participants are selected from 200 participants for the study.

### **REASONS TO JOIN SHG**

The main objective of SHGs is to encourage financial savings and funds for productive and useful purposes. Regardless of social status, many join SHGs to obtain credit and increase in public savings. In the current study, respondents joined self-help organizations to obtain loans, earn more money, and achieve several community-building goals. Considering the reasons for joining SHGs, 40% so 40 respondents joined SHGs to get loans. It should also be noted that 45 percent, i.e. 45 respondents, joined self-help organizations to earn money. 15 percent, that is 15 respondents, joined the GSP for social mobilization.

### **Attitude to Family Members**

After joining the mutual aid group, the attitude of the respondents' family members changed. 68% of the respondents indicated that their family members were not encouraged to join and work in the SHG. Only 32% of respondents said that family members encourage them to join self-help groups.

### **Change in Income After Joining SHG**

After joining mutual aid groups with change in income of 60% respondent of respondents after joining self-help. The groups received a significant increase in income. It is also reported that 24% of respondents Joined mutual aid groups, A significant increase in income and the remaining 16% said they had less income after joining self-help groups. Thus, more than three-fifths of all social classes reported that membership in self-help organizations significantly increased their income.

### **CONCLUSION**

The above assessment shows that most of the role of the respondents is currently related to the SHG group through Self Help Organizations. Most of the respondents joined mutual aid groups to get credit. More than half of the female respondents noted that their husbands encourage them to join the SHG. A very significant part of the respondents said that family members encourage them to be part of the SHG and to work. Most respondents said it is a time-consuming process. The absolute best proportion of respondents indicates that the bodies related to the SHG are functioning properly. A significant part of the respondents stated that talent is no longer sufficient for effective teaching. Most of the respondents borrowed between 10,000 and 20,000 rupees and repaid the amount within 10 months. Most respondents said that their awareness of many problems improved after participating in self-help groups. Community relationships increase the proportion of respondents who say they have improved after participating in self-help.

### **SUGGESTIONS**

In view of the above findings of the study, following suggestions are given for higher functioning of Self Help Groups.

1. Since some SHGs are no longer trained, it is recommended that authorities take serious steps to train every SHG and its member.
2. Joining a support group makes sense to be there the discretionary income increased respondents in this context may suggest that Women should be encouraged in this field improvement can show that people are poor. The main thing is motivation and encouragement improving their standard of living through SHGs and Other such groups.
3. In addition to providing financial assistance for the socio-economic development of women in the framework of women's policy, public organizations are recommended to take measures to improve the social service institutions.
4. Women want to be politically influential and thus influence their preferences and movements in public institutions. Women should be part of the employer at the local level so that they can work safely and protect their interests. They must make a real effort to attract attention to exclusive use and have the skills or training to remain within their existing socio-political group.
5. Providing sufficient promotional and marketing offers in different areas and regularly will greatly improve the productivity of the units. Therefore, it is necessary to take measures to ensure persuasive marketing.

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A COMPARATIVE M/C LEARNING STRATEGIES FOR ANALYSIS OF MELA-NOMA SKIN CANCER

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TECHNICAL ABSTRACT

Depending on the type of cancer, the chances of survival vary. Some skin cancers are fatal if not treated early, while remaining related to less death risk. Melanoma cancer is deadly once it traversed overly, but it can be treated if caught early. Melanoma treatment necessitates dermoscopy-based early detection and identification. Technically sound-dermatologists, otherside, help in significant diagnosis accuracy. My paper focuses on varied techniques of machine-learning compiled by different authors elaborating the melanomial cancer early detection.

Keywords: Tumorous, Skin Melan-oma, ML, Prognosis

1. CONCEPTUAL INTRODUCTION

A common fear that people face is Skin- cancer. As per ACS nearly 1,06,110 fresh cases of mela-noma can be found in the US [ 2023 ] with approximately 8,180 people dying from the disease. Melanoma is 1% of all skin cancer diagnoses, & it contributes to more than 75% of skin cancer-related deaths. 10000 nationalites death per year or one every 1 minutes. Melanoma is "most serious type" of skin cancer, and it develops when melanocytes, or skin-coloring cells, develop cancer. According to reports, India has over a million melanoma cases.

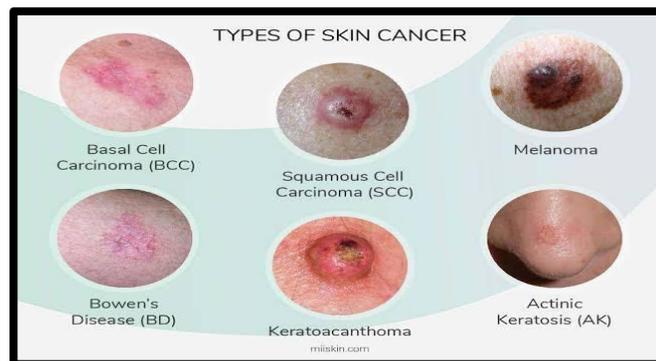


Figure-1: Types of cancer

2. DERMA ROLE OF ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING

ML as sub-set of AI facilitates achieving the goals. AI - utilizes machine's and progra-mmes to duplicate smart human way of behaving. Calculated relapse, arbitrary timberland, and profound learning are instances of ML calculations and factual techniques. Despite the fact that AI might seem strange from the outset, it is firmly connected with customary measurable models that most dermatologists are know all about.

There are three types of machine learning techniques as described in below table :

<p>TYPES OF MACHINE LEARNING (TOWARDS DERMATOLOGY )</p>	<p><b>Supervised/Directed Learning :-</b> Need features as input and labels as output. The algorithm is trained on labelled images of melanoma and benign pigmented lesions before being applied to a new set of never-before-seen skin images. Supervised learning is the most common type of learning in dermatology.</p>	<p><b>Unsupervised Learning:-</b> Only unlabeled data is required. This method is capable of detecting previously unknown data clusters or anomalies.</p>	<p><b>Reinforcement Learning :-</b> It is a combination of supervised and unsupervised techniques that employs a trial-and-error approach.</p>
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Dermatology routinely employs a variety of machine learning methods. Based on number of k neighbours, the k-NN algorithm classifies and predicts data. SVMs classify data by locating a hyperplane that divides it into groups etc.

**3. DERMATOLOGY MACHINE LEARNING VISION:-**

Deep-learning-sort of AI recreates neuron's processing data utilizing factual & numerical models. Counterfeit brain organizations (ANNs), otherwise called brain organizations (NNs), are networks compri-sed of interconnected units (like hubs, neurons, and cycle layers). ANNs were propelled by the organization of neurons in the human mind. The ANN's-neurons coordinate to direct clusters. Every hub gets information from different hubs by means of weighted associations. Making an ANN involves settling on the quantity of hubs in each layer, the quantity of layers in the organization, and the way of the associations between the hubs. A customary ANN is compri-sed of information layers, yield layers, and secret layers. Through an educational experience, ANNs are instructed to perform explicit undertakings like order. ANNs can advance either administered or solo, yet the previous is more normal.

**4. ML MELANOMA: -**

Melanoma-the most normal obtrusive malignant growth in the United States, with a rising worldwide pervasiveness. Melanomas are additionally liable for by far most of skin malignant growth passings. A complete body skin assessment is performed to evaluate for skin disease. Sadly, screening rates are amazingly low, as indicated by National Health Interview Survey information (16% for men and 13% for ladies). Accordingly, the main profound learning calculations on mela-noma grouping defeats low-screening rates & answer all the more successfully.

Name of Author	Year of publication Contribution	Findings
Esteva et al.	2017	One of the principal milestone studies to precisely analyze harmful melanoma was distributed in 2017 by Esteva et al. GoogleInception-V3, which had been pre-prepared on 1.28M normal pictures items, was utilized in this examination. The creators prepared the calculation on 129,450 dermoscopic and clinical pictures utilizing move learning. This was the primary classifier that could differentiate between keratinocyte disease and seborrheic keratosis, as well as dangerous melanoma and harmless nevi. CNN took care of business 72.1perc% majo-rily, while di-dermatologists hit the nail on the head 65.56 percent and 66 percent of the time, individually. The all out region under the recipient working trademark (AUC) of CNN was [91 percent], similar to the typical result forecasts of 21 dermatologists.(M-MILLION , DI-TWO)
SS Hans et.al.	2018	Skin cancer was classified utilizing deep learning algorithms in 12 clin-ical images. They utilized biopsy-proven images sourced through- Asan-test dataset's & Edinburgh dataset the performances of the dermatologist panel and their algorithm. The diagnosis accuracy of the Edinburgh dataset was slightly lower than that of the Asan dataset due to differences in patient ethnicity and variations in overall image contrast due to varying lighting and backdrop. At this time, only 12 clinical photos can be classified. To accurately reflect the world's population, these algorithms must be trained and validated across a broader range of population sets. The majority of algorithms are tested on Caucasian or Asian patients.

<p><b>Cui X et al.</b></p>	<p>2019</p>	<p>Skin disease was arranged involving profound learning calculations in 12 clinical pictures. They utilized biopsy-demonstrated pictures from the Asan test dataset and the Edinburgh dataset to think about the exhibitions of the dermatologist board and their calculation. The analysis exactness of the Edinburgh dataset was marginally lower than that of the Asan dataset because of contrasts in persistent nationality and varieties in by and large picture contrast because of differing lighting and background.</p> <p>Right now, just 12 clinical photographs can be arranged. To precisely mirror the total populace, these calculations should be prepared and approved across a more extensive scope of populace sets. Most calculations are tried on Caucasian or Asian patients.</p>
<p><b>Lopez et al.</b></p>	<p>2019</p>	<p>offer a strategy that utilizes the exchange learning worldview and depends on the VGGNet convolutional brain N/w engineering created by University of Oxford's Visual-Geometry-Group in three ways:</p> <ul style="list-style-type: none"> <li>(I) developing the CNS starting from the earliest stage;</li> <li>(ii) utilizing highlights from VGG-Net pre-prepared greater dataset to apply the exchange learning worldview; and</li> <li>(iii) holding the exchange learning worldview while tweaking the CNN engineering.</li> </ul> <p>Constraints:</p> <ul style="list-style-type: none"> <li>(I) not utilizing a bigger dataset to keep away from overfitting;</li> <li>(ii) no tweaking of hyper boundaries or regularization changes; and</li> <li>(iii) preparing the engineering with Imagenet, a general dataset.</li> </ul>
<p><b>A.Dascalu.et.al.</b></p>	<p>2019</p>	<p>Sonification and a simple skin magnifier with captivated (SMP) light were utilized to examine the impacts of picture quality on determination exactness. SMP dermoscopy pictures were sonified subsequent to being handled by a first profound learning framework. A valuable Deep Learning was utilized to inspect the sound result. The review models results for SMP were explicitness and responsiveness, which were then handled by a F2-score, which gives awareness two times as much weight as certain prescient qualities.</p>
<p><b>M, Vijayalakshmi.</b></p>	<p>2019</p>	<p>The creator proposed a model that comprises of three stages: Phase 1 comprises of the assortment of datasets, the pictures dataset, which likewise incorporates the pre-handling of the pictures are finished to productively distinguish variety, shape , size like boundaries.Phase 2 separate elements for size, variety ,shape &amp; surface. Stage 3 is a significant model period, which incorporates model plan and preparing. The objective of this undertaking was to decide the exactness of skin disease forecast as well as to characterize skin malignant growth as harmful/Non-threatening Mel-anoma. To accomplish this, some pre-handling steps were taken, like hair evacuation.</p> <p>Dataset utilized: ISIC (International Skin Imaging Collaboration)</p> <p>Curiosity of above system : It helps in location in extremely fast time subsequently supporting the experts to consummate their analytic abilities.</p>

<b>M.A.Kadam-pur</b>	2019	proposed a cloud driven model design that involves profound learning calculations in essential executions to construct models that guide in the more precise expectation of skin disease. Atask portrays models utilizing them to group pictures of dermal cells. They fostered a stage that permits non-software engineers to fabricate intuitive profound learning models. It suggested general techniques and circling designs in profound learning model development, considering greater adaptability in profound learning classifier creation. One of their restrictions is that their methodologies are not automatically carried out.
<b>Praveen Banasode et.al.</b>	2021	To identify the result of Skin Cancer, a Support Vector Machine grouping calculation was proposed. They started by investigating the skin picture, later changing over it into B-G-R:GRAY and B-G-R:HSV for PC to comprehend & peruse double codes. The discoveries of this study can assist specialists with treating sickness at a beginning phase, forestalling further crumbling.

### CONCLUSION

This paper talks about different AI methods for early identification of Melanoma skin disease. Moreover, the as of late proposed strategies for the creators, the dataset they utilized, and the precision they got are totally examined. Dermatologists' ongoing information is important for melanoma finding. Incorporating master information into the profound educational experience is a significant exploration point because of the shortage of clinical information and the various quality difficulties.

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**RECENT TREND ON PROGRAMMABLE LOGIC CONTROLLER FOR DATA SCANNING OF MECHANICAL DEVICES**

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**ABSTRACT**

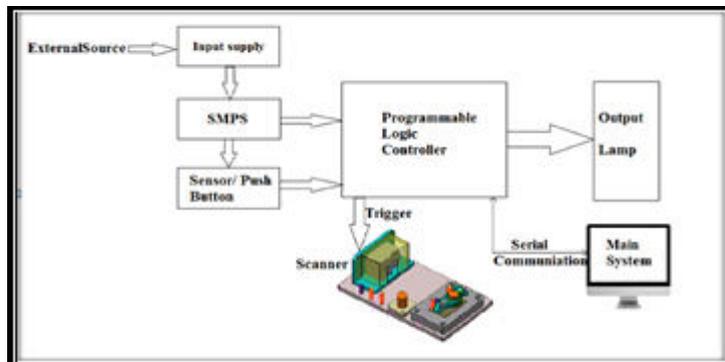
*This project demonstrates a live implementation of the Rocker Arm(Mechanical Device) Traceability (Data Scanning) Checking System using Programmable Logic Controller (PLC). PLC is frequently used controllers and it is simple to operate and manage functions according to the program which is fixed already. Traceability is nothing but serial number, production line number, Production Date of object through software with the help of PLC. In this project we will check the traceability of Rocker Arm with help of scanning barcode to store the past data of part (Rocker Arm).*

*Keywords: Rocker Arm, Traceability, Programmable Logic Controller, LAN network. Lamp, ID Gauging.*

**INTRODUCTION**

In this project we are using Programmable Logic Controller to check the traceability Rocker Arm with the help of scanner. In this project we will check the traceability of the rocker arm. Traceability is nothing but to find out the scanned data which is printed in the form of barcode or some else, For example, In this project we trace the data which is printed on part (Rocker Arm), The data like serial number, date code, unique code etc. In this Project there are four stages such as marking, ID Gauging, Toe Pressing, SPM Screw & Nut Assembly. All this stations are connected through a LAN network.

The first station will Mark one barcode. And then the operator will put that rocker arm on the fixture. Now we are using Keyence camera for scanning of that barcode. And it will trace the details of the rocker arm through the data base of system, and based on that Lamp will show the output.



**Functional Block Diagram**

In this project we have developed a system which can trace the barcode which is printed on rocker arm and store the data in a system through PLC. We have used 230V AC external supply. Then we have given that supply to SMPS through switches and MCB. SMPS is nothing but Switch Mode Power Supply. The SMPS will provide +24V DC supply. We have given that supply to PLC as an input supply, PLC inputs and for Convertors through fuses. Fuses are used for safety purpose. We have also given supply to sensors.

There is a fixture for scanning process. We have used PNP sensor to sense the presence of rocker arm on the fixture. We have used Keyence Camera to scan the barcode present on Rocker Arm. When sensor senses the object, it gives the input to PLC. Then PLC will give trigger to camera and camera will start scanning process. After scanning, the scanned data will be stored in system through PLC. We also have used Lamps at front of the Panel.

**Block Diagram of Assembly Line**

In this assembly line there are five stages.

**1. OP-10 Marking**

This station will have PC system. Software and database will be installed on this system. The software will be used to setup the assembly, component (part), parameter and other details. It will show the report and charts for the past data. Camera will be connected to the PC system directly. Record will be generated for the scanned code. Software

will indicate whether the code is exist (red) or newcode (green) on the screen.Screen to show parameter details of selected part and entered serial no.

**2.OP-20 Gauging**

Scanner and gauge unit is connected to Interface-Unit. Interface unit will be connected in network to communicate with software. Different indicating lamp and buzzer to indicate the sequence of operation. BLUE lamp: Ready For Scan- Operator will load the part on the fixture to scan the code. GREEN lamp: Part Status- If the part is OK from marking station. RED lamp: Part Status- If the part serial no record not generated on marking station. YELLOW lamp: Measurement-Waiting for gauging unit data. WHITE lamp: Data received- Gauging unit data received and waiting for confirmation from software for OK/NOK status of parameter. GREEN lamp: Part Status – OK from software RED lamp: Part Status – NOK from software

**3. OP-30 Toe Pressing**

Scanner and load cell unit is connected to Interface-Unit. Interface unit will be connected in network to communicate with software. Different indicating lamp and buzzer to indicate the sequence of operation.

**4.OP-10 Screw and Nut**

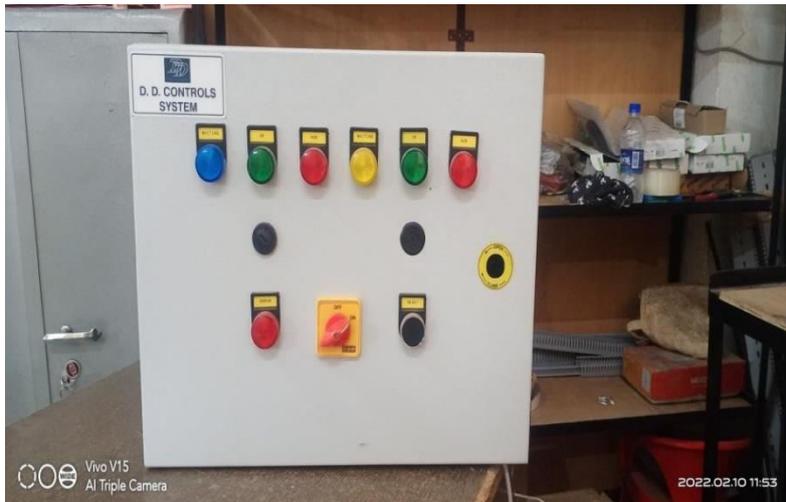
Scanner and SPM’s PLC is connected to Interface-Unit.Interface unit will be connected in network to communicate with software. Different indicating lamp and buzzer to indicate the sequence of operation. Consider there will be 5 part on the rotating table. After software status received BLUE lamp will get on.

**5.OP-20 Final Assembly**

Scanner and Delta PLC is connected to Interface-Unit. Interface unit will be connected in network to communicate with software. Different indicating lamp and buzzer to indicate the sequence of operation.

**Actual Implementation**

**Hardware Tools, List of Hardware Tools**



**PLC (Programmable Logic Controller), SMPS (Switch Mode Power Supply) , Serial Converters, Proximity Sensor, Keyence Camera, Lamps for Indication, Rocker Arm**

Working and Description of Hardware Tools

### 1. PLC (Programmable Logic Controller)

PLC (Programmable logic controller) is digital logic controller, which takes the signal from input such as sensors, push buttons, limit switches etc. Then controller solves the logic it performs the operation and gives the signal in the form of output such as lamp, motor, relays, contactor etc.

In this project we have used Delta's SA-2 Series PLC. Delta DVP Series PLC offers high speed, stable and highly reliable application in all kind of industrial application machine. It allows various communication protocols also it is cost effective. In Delta DVP SA2 Series PLC there are 8 input and 4 outputs are available.

#### PLC Scan Method

**Input signal:** PLC monitor the ON/OFF status of each input and stores the status into memory before verify the user program. External input status is stored into internal memory then any change at the external inputs will not be updated until next scan cycle begin. **Program:** PLC run the instructions in user program from top to down and left to right after that it stores the evaluated data into internal memory. Some of this memory is latched. **Output:** When END command is reached then the program evaluation will complete. The output memory will be transferred to the external physical outputs.

### 2. Power Supply

In this project using Switch mode power supply. This supply changes the 220V AC into 24V DC of the current rating two Amperes. There is a regulator also, by using which we can control the output value of SMPS [4]. Electronic power supply is a switched-mode power supply that incorporates a switching regulator to convert electrical power effectively. SMPS PASSES power from a source such as mains power, to a load, while converting voltage and current Properties of personal computer. A linear power supply, the pass transistor of a switching-mode supply continually transfers between low-dissipation, full-on and full-off states, and spends little time in the high dissipation transitions, that minimizes wasted energy. Normally a switched-mode power supply dissipates no power.

In this project using SMPS (switch mode power supply). The SMPS is used to change the 220V AC supply into 24V DC supply with current rating of 2A. It can control the final value of SMPS with the help of regulator. The SMPS is an electronic circuit which convert power with switching devices that on and off at very high frequencies. It storage component like inductors or capacitors that supplies power. In this project we have used Delta's SMPS. And we have used Fuses. The Fuse Breaks the circuit if there is a fault and it caused the too much current, it can damage any component of the system. So we have used fuses for safety purpose. We have also created 24V and 0V Bus bar, so we can take supply from it for further use and future purpose.

### 3. Serial Converters

USR-TCP232-306 is a multi-serial port server, whose function is to realise bidirectional transmission between RS232/RS485/RS422 and Ethernet. Ethernet to serial converters USR-TCP232-306 supports both interfaces RS232 and RS 485.

#### Product Function

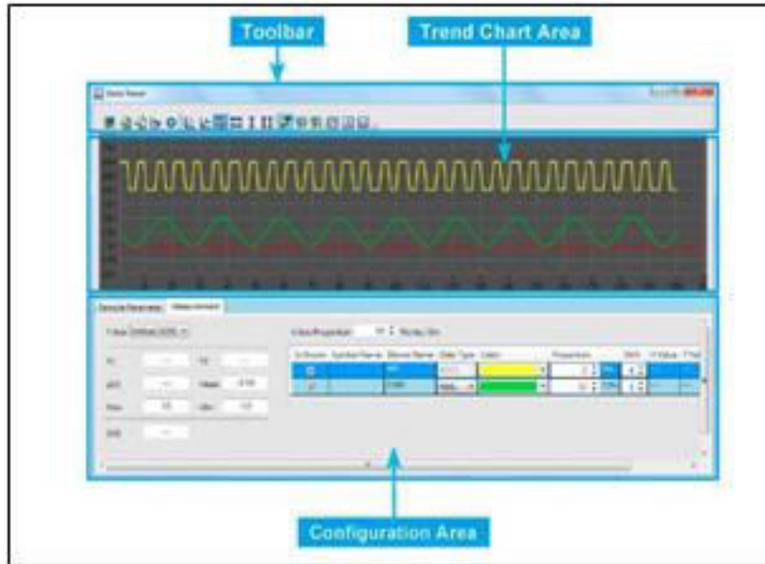
##### A. Features

Ethernet port 10/100Mbps is supported to Auto-MDI/MDIX and Support TCP Server, TCP Client, UDP Client, UDP Server, HTTPD Client. It Support Baud rate from 600bps to 230.4 kbps; Support None, Odd, Even, Mark, Space. It also Support heartbeat packet and identity packet. Support RS232, RS485 and RS422. Support web server, AT command and setup software to configure module. Support timeout reset function. Support TCP Client non-persistent function. Support DHCP/Static IP. It also Support software/hardware reloads. Support virtual serial port with USR-VCOM software.

### 4. Proximity Sensor

In this project we have used PNP sensor to sense the presence of the rocker arm in the fixture. PNP sensor is nothing but a sourcing sensor. When an object enters the detecting range of the sensor, it provides active high output. The output of sensor is connected to the PLC. The PLC receives +24V as an input when sensor senses the object. Proximity Sensors identify an object without touching it and they therefore do not cause abrasion or damage to the object. Devices such as limit switches detect an object by contacting it, but Proximity Sensors are capable to identify the presence of the object electrically, without having to touch it. A proximity sensor is a sensor able to identify the presence of nearby objects without any physical contact. A proximity sensor always transmits an electromagnetic field or a beam of electromagnetic radiation (infrared, for instance), and it looks for changes in the field or return signal. The object being identified is often referred to as the proximity sensor's

target. Different proximity sensor targets demand different sensors i.e a capacitive proximity sensor or photoelectric sensor suitable for a plastic target, inductive proximity sensor usually requires a metal target.



**5. Keyence Camera**

In this project we have used keyence camera , for scanning purpose. When the operator put the rocker arm on the fixture, the sensor will sense the object and then PLC will give trigger to the camera. Then camera will start scanning process. This keyence camera has power input of 24v dc 700 mA.

**6. Lamps for Indication**

The main function of Indicator lamp is to reflect the working state of the circuit (It may be electric or non-electric), the working position of the electrical equipment (operation, shutdown or test) and the position state (closed or disconnected).

**7. Rocker Arm**

The main function of Rocker Arm is the part responsible for Passing the movement of the camshaft towards the intake and exhaust valves of engine, In this process that occurs through the direct contact of these parts with the tappets and as per the movement of the shaft.

**Software Tool**

**Smart Programming Interface**



Novel Functions: Network configuration, hardware configuration and PLC card. Support 5 Programming Languages (LD/FBD/SFC/IL/ST) Monitor Table: It can be stored and managed separately. Multiple monitor tables can be stored in a single project. Task: Supports cyclic, I/O interrupt, timer interrupt, external interrupt and more.

**B. Convenient Wizards**

Data Tracer: Provides high speed data log ability and the interval could be 1 CPU scan. Users can easily analyze the program logic with this function. Data Logger: Provides big data log ability and adjustable intervals. Users can log critical system data and then analyze the system operation status.

**Software Programming Results**

In this Project we have scanned the data on the Rocker Arm with the help of Scanner which is Keyence Camera. After finishing the scanning process the data will be stored in the PLC (Programmable Logic Controller). We can take that data in computer from the system. In Future we can take that data back to check the traceability.

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**ADVANTAGES**

In this project we have stored the data. With the use of this system, there will not be double component which is Rocker Arm with same serial number. In this we have given this system and fixture to each station so user can check the traceability at each station.

**CONCLUSION**

In this Project, there was requirement to check the traceability (Data Scanning) of the object which is Rocker Arm. Using this system we can trace the barcode which is present on the Rocker Arm. That data will be stored in the system through Programmable Logic Controller. We can take that data in future and there will not be double component with same serial number.

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**DIGITAL GENDER DIVIDE IN INDIA – A REALITY CHECK****Ms. Rama Ray**

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**ABSTRACT**

*In recent times, the swift growth of Infotech & Telecommunication worldwide is quite remarkable. It has a very critical part to play in all facets of human life. This phenomenon has caused conspicuous discrimination between those who can use these technologies and profit from their constructive aspects, and those who cannot.*

*Offline Gender Disparity continues Online too. Even though the world has become progressively digital, the Digital Gender Gap is quite conspicuous & perilous. The figures over the years demonstrate a continual gender gap regarding access to the Information and Communication Technologies that endorse societal and financial progress. The disparities between females' and males' accessibility to and contribution to ICTs are quite evident. It also emphasizes the fact that a lot needs to be done to guarantee females should be able to share the advantages of the knowledge-based global economy, just like men.*

*This discrimination has a very significant impact on women's incomes, well-being, and education. As humans become more digitally reliant, the gender divide can cause women folk to be deprived of being part of the digital economy and its advantages. The conventional prejudices, barriers, and limitations prevent women from completely accepting and utilizing digital skills in their daily lives. The gender technical knowledge gap also adversely influences nations' potential for economic development and progress.*

*Keywords: Digital, Gender Divide, Accessibility, Prejudices*

**INTRODUCTION**

**“Women belong in all places where decisions are being made. It shouldn't be that women are the exception.”** Ruth Bader Ginsburg

Gender disparity has been part of human society for ages and despite all the progress and advancement we have made, unfortunately, it still exists even to this day and age. Human civilization has come a long way, but when it comes to true evolution in the matter of gender roles in society, we are yet to attain the desired equal status of women whether at home or workplace. Discrimination persists in all aspects, especially in the area of science and technology.

The Patriarchal structure of society in most parts of the world has made it quite difficult for the female population to have equal rights in the matter of education, profession, and even procreation. Most men believe that they are superior to women and as a result treat them in an unfair and as unjust manner. The gender disparity has many long-term effects on society as a whole and especially on the growth and progress of women half of the population. The discrimination is evident in the form of a lack of opportunities for education, sports, pay gaps, social status, etc.

One of the most prominent areas where the disparity is quite glaringly obvious is the technological world. In many parts of the world, women are deprived of opportunities to benefit from technological advancements due to their gender. India is one such country where women face gender disparity in the technological field, especially in rural areas. This is due to the conservative and pervasive mindsets of people and a lack of proper education facilities. The financial dependence of women on the male members of the family is also one of the reasons as well as the results of this discrimination.

**OBJECTIVES**

- To understand the Reality of Gender Digital Disparity [GDD].
- To assess the influence of the Digital Divide based on Gender on Society & Economy.

**RESEARCH METHODOLOGY**

- Primary Source – Data collection through a structured questionnaire.
- Secondary Source – Books, Journals, Newspaper, Internet, etc.

**LITERATURE REVIEW**

Digital Divide figuratively defines the apparent problems faced by people who are either not able to choose not to or know how to use digital technologies in their daily lives (O'Connor et al., 2008). Technological communication is likely to go against traditional cultural protocols, given the oral type of interactions with family, kin, and communities (Cullen, 2002).

In the second half of the last century, mankind assumed a "great responsibility to make our wondrous reservoirs of matter more accessible" (Bush, 1945). The result has been an enduring social, creative, political, and cultural transformation based on a global communications infrastructure that embraces innovations such as the Internet, mobile phones, and social networking applications of all shapes and sizes. rice field.

At the dawn of this new century, society as a whole is beginning to cling to these revolutionary devices. These devices will forever change the way we communicate, direct our actions, and form social connections (Bell, 1973; Perez, 1983; Webster, 1995; Negroponte, 1995; Castells, 1996). 2001; Freeman and Louça, 2001). It focuses on the issue of access to digital systems: who has permission and who is informationally excluded through the use of these new devices.

Materials access is positioned with economic, technological, social, and cultural contexts. Individuals with technology devices contribute to online social connections based on their power. In developing countries, household income levels are not evenly distributed, creating wide disparities between the rich and the poor, which unfortunately undermines individual education options (Mishra 2018). In addition, low-income households. Villages and small towns are most affected by the digital divide (Maceviciute and Wilson 2018).

Cultural imperatives can further impact device use (or digital opportunities) and limit users' digital skills and capabilities. Female users, for example, are reluctant to take advantage of digital opportunities because they have to meet gender-specific expectations specific to many families. This gender perspective focuses on the way girls are rejected by their families compared to boys. Reasons for the lack of funding include concerns about the safety of online networks, economic constraints making daughters less likely than sons, increasing women's domestic responsibilities, or a general aloofness towards girls. (Alozie and Akpan). -Obong 2017; Borgonovy et al. 2018).

**DATA ANALYSIS & INTERPRETATION**

The digital disparity between males and females is pervasive inequity in the case of womenfolk and is an undesirable impediment to their involvement in the social order worldwide. It acts as a hindrance to the progress of the international economy. This digital divide is not entirely a technological issue, but also a multifaceted financial, societal and cultural matter, basically linked to the cause of gender discrimination. Deprived of equivalent usage of technology, the womenfolk are unable to contribute completely to our progressively digital world.

In contemporary times Digital Literacy is almost as significant as conventional literacy. In developing countries, girls and women face a tough time getting technology and internet access. Moreover, socialization designs typecast around technology being male dominant field, and anxiety of inequality quite often stops girls from using the digital medium.

are numerous factors stopping women and girls from accessing the internet and contributing online? These comprise expensive gadgets and data charges, disparities in education and digital capabilities, social customs that stop females from going online, and also concerns about their privacy, security, and safety.

**FIGURE 1**

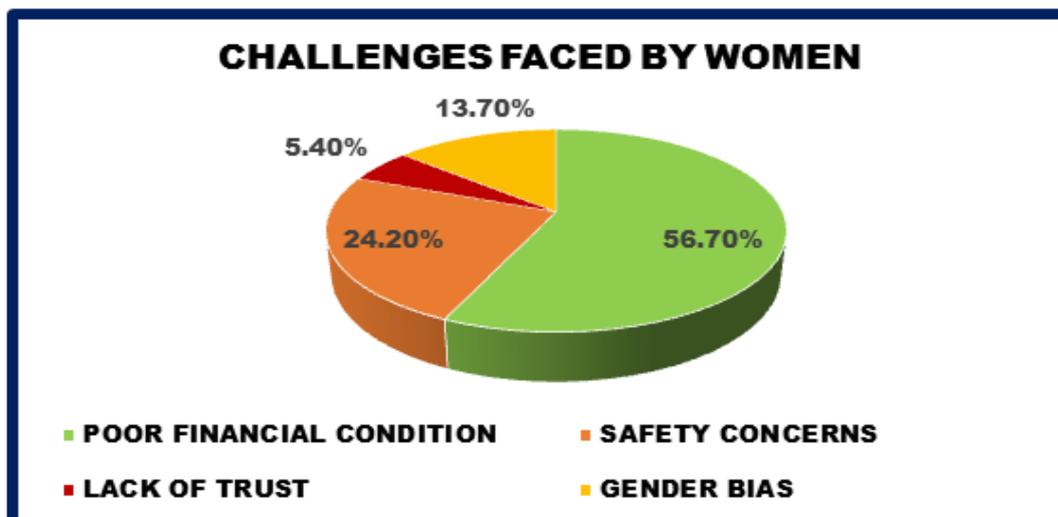
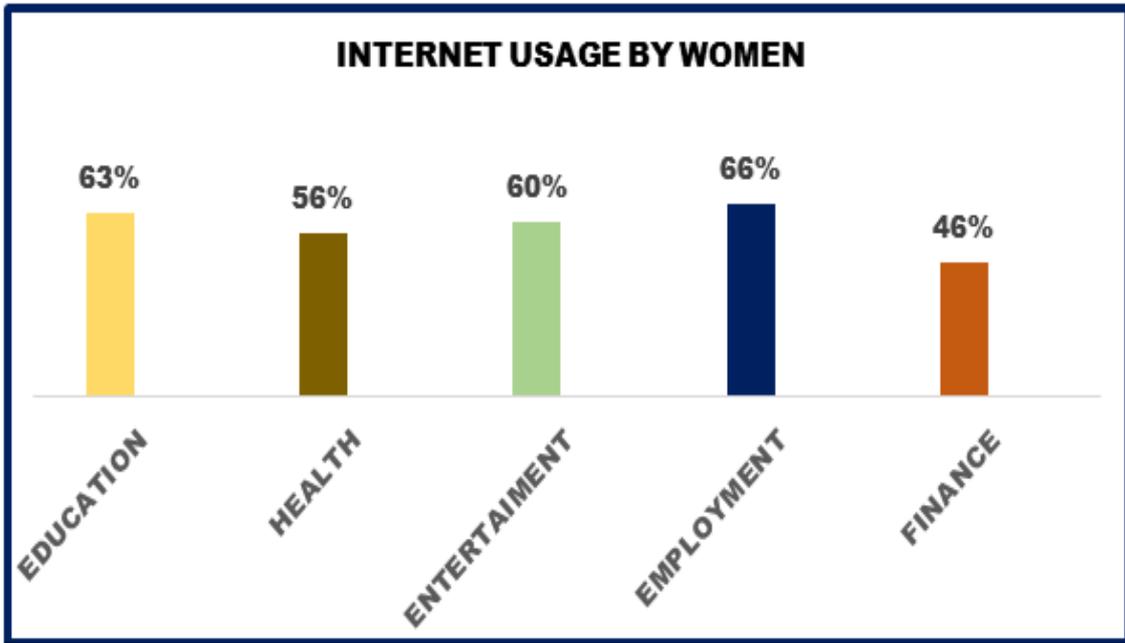
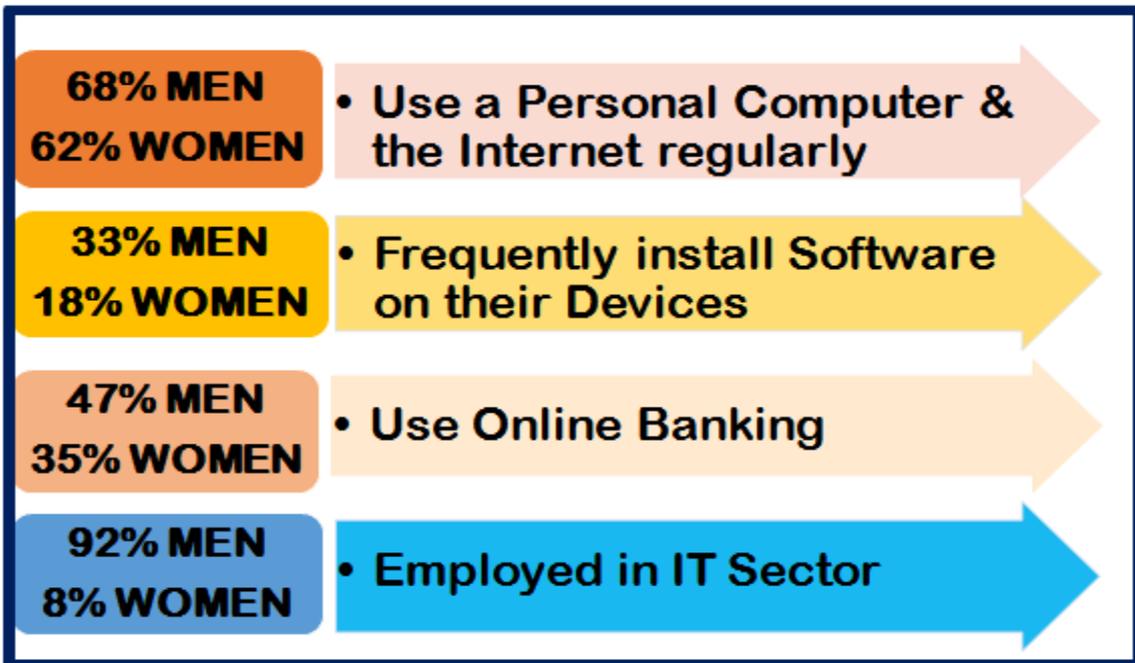


FIGURE 2



This gendered digital divide is mainly the result of three important factors. First, is the Village-City gender-based digital disparity, like the countryside broadband dissemination, which is barely 29 % compared to the nationwide figure of 51 %. In most regions of India, women folk in villages are not expected to have mobiles. Second, the digital divide between families is based on their income. Lastly, discrimination within the household stops women from equitably using digital gadgets and services which amplifies the gendered digital divide. When the women have the facility to use mobiles; their presence on the internet is mostly overseen by the menfolk of the family.

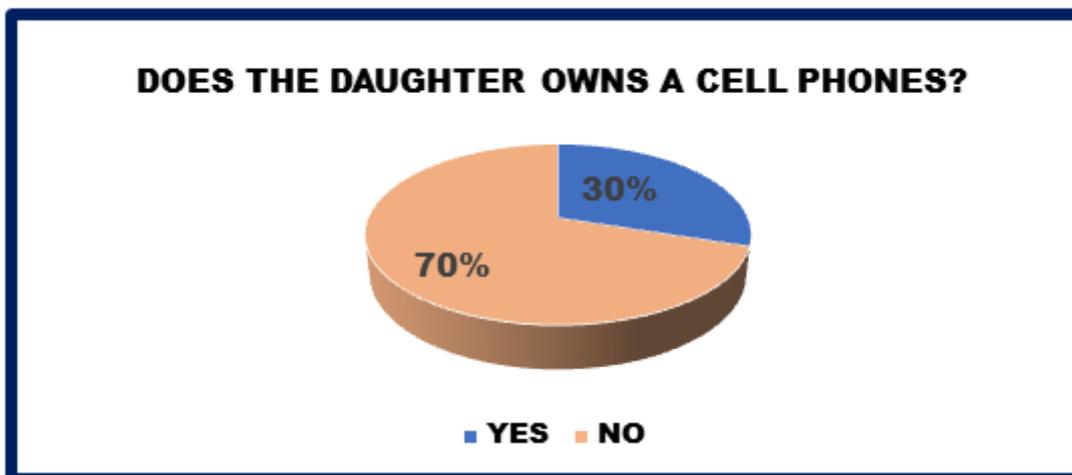
FIGURE 3



**COVID-19 IMPACT**

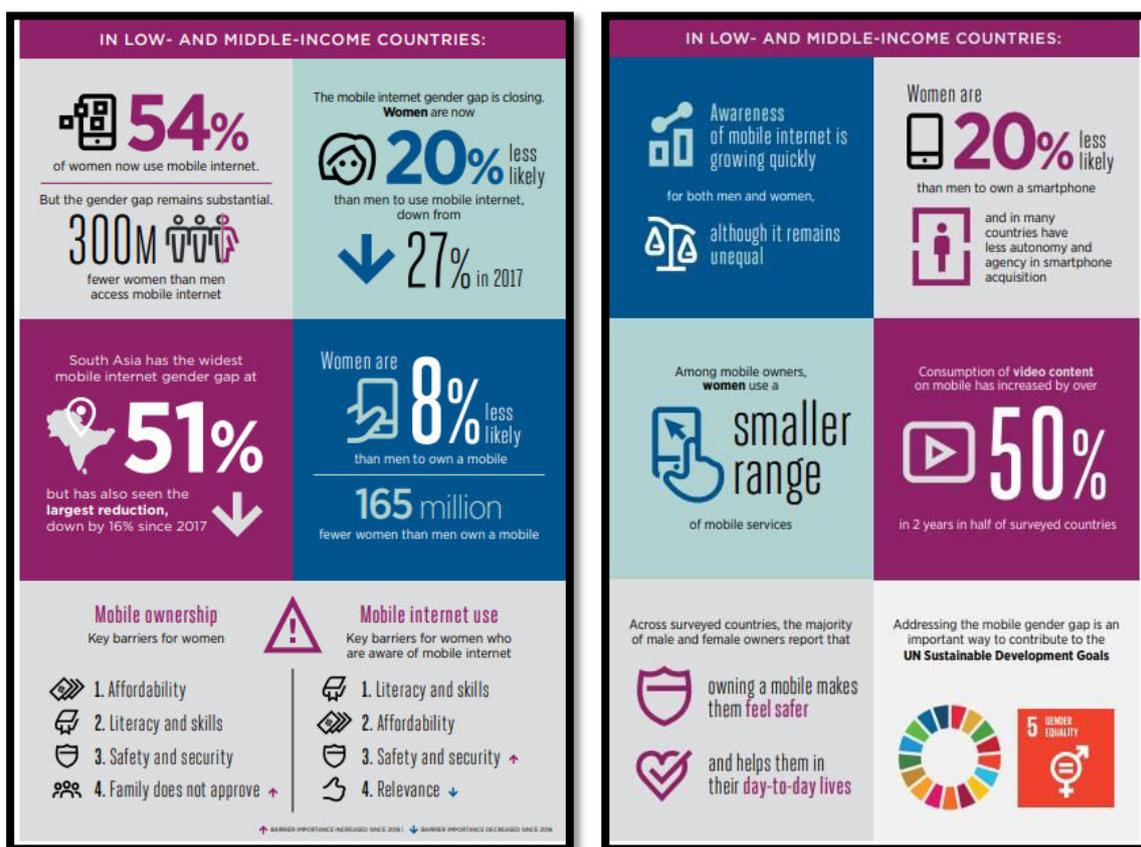
Technological ignorance and unawareness of technical avenues prevent female business owners from shifting to electronic mode during and after the COVID-19 Pandemic. Study reveals that women were burdened with added tasks during the Pandemic and were put in an unfair situation. Most of the women had the entire responsibility of their homes which intensified their secondary position in the family. They could neither afford to acquire the advanced digital gadgets nor had the time for learning the new technology required to sustain their business.

FIGURE 4



The COVID-19 lockdown in India also affected 158 million girl students, extinguishing their dreams and hopes of formal education and improved living style with one blow. For many of them, online and digital learning was not even a possibility. Restrictions levied on womenfolk in this region touch every facet of their existence, their capability to express opinions and points of view to start transformation on matters that have influenced them.

FIGURE 5

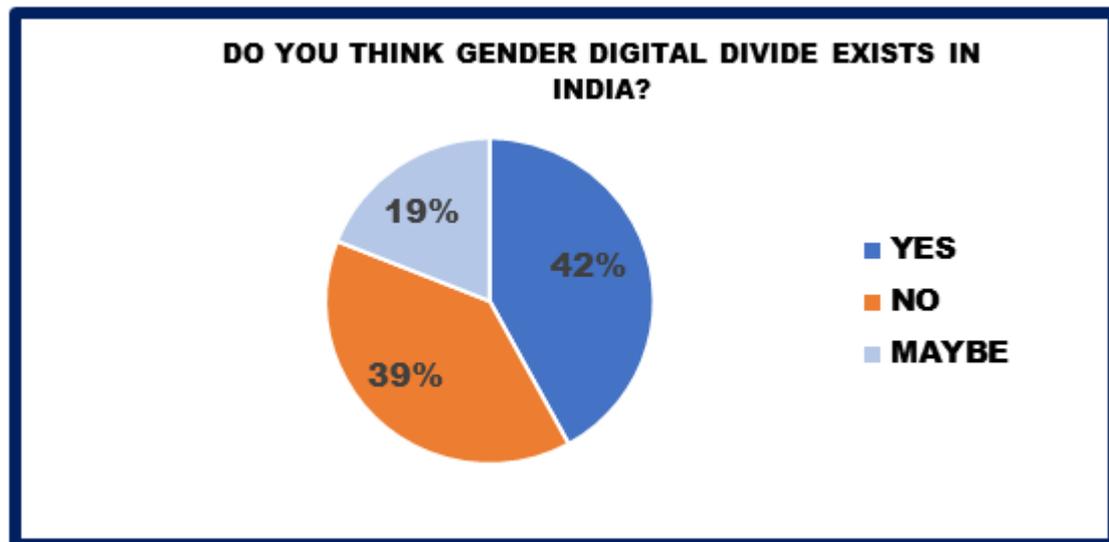


REALITY CHECK

With the beginning of unparalleled technological and digital developments in the contemporary era, India is experiencing a broadening dissimilarity between those who have and those who don't have access to technical knowledge and gadgets. The survey emphasizes that gender customs and traditions downplay women's contributions to the rural economy while degenerating their existences to their procreative functions. Economic obstacles, such as economic dependency, in the meantime, can be largely accredited to strict social customs rather than being deterrents of disparity. The monetary dependency then again leads to operational inequities which inevitably sets already existing downgrading.

The outcome of this study is relevant in the humanitarian setting as technology is important. If it is not neutral or submissively adapted. The interventions must be combined with gender-sensitivity actions, only then can reach those who need them most. At the same time, if programs do not consider these inferences, their programs interventions are not gender-neutral but solidified disparities and power imbalances.

FIGURE 6



### RECOMMENDATIONS

More than 90% of professions all over the world have an existing technical component and maximum professions will shortly entail advanced technical knowledge. If the administrations provide technical training to females by prioritizing schooling in technological topics, they will assist the young women to prosper in economies where regular work has been mechanized and technical services are valued. Technology can also be an influential instrument for young women to learn how to fight for their rights and bring transformation to matters that have an impact on them.

Social - Media Networks, for instance, let reformers influence a widespread target and organize activities for public welfare. Furthermore, if womankind does not contribute to the creation of technical and electronic material, these seemingly pioneering measures can intensify prevailing disparities. Providing impartial access to Cellular Phones and the Net will help females with the data and assets they will require to efficiently add to the nation's financial system.

### CONCLUSION

**“Believe that there are no limitations, no barriers to your success you will be empowered and you will achieve.”** - Ursula Burns.

Indian society is still largely patriarchal, for girls, traits like reverence and compliance are often appreciated over intellect and interest. In some families, technology is still not seen as necessary or beneficial for girls and women. Guaranteeing equal opportunity for the usage of technical knowledge is crucial for attaining women's full inclusion in the E-Business and society at large.

Even though India, is the only country in the world to obtain maximum points for STEM and ICT for tertiary graduates, India scores zero in the case of female workforces in the ICT sector. This points to disengagement between the reality of India's ICT workforce— and what the data shows. Dealing with the gaps in gender parity is critical for overcoming digital and non-digital divides.

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**IS CONSUMER ANALYTICS OVERBURDENING THE CONSUMER? A STUDY ON EUROPEAN CONSUMER MINDSET IN THE ERA OF DIGITAL ADVERTISEMENTS****Jay R. Shah**Communications Officer at Med-Di-Dia Limited  
International Management Graduate from the University of Galway, Ireland**ABSTRACT**

*Digital Advertisements have become the latest tools for mass advertising and brand awareness building. With the rise in applications like Instagram, LinkedIn and Tik Tok, companies depend more on product virality than brand value. This study explores the mindset of Young European Consumers who are regularly targeted by companies with multiple advertisements on social media platforms. An average Gen Z has to spend nearly 70% of their time online to complete education, hobbies, friendly outings and other routine tasks. All this online usage has become data points of profits as the companies run advanced Artificial Intelligence and analytics algorithms to target their consumers and sell their goods and services. At one point, the consumer is forced to purchase a product due to repetitive advertisement. This study highlights the thoughts of the young generation who is severely struggling to maintain the right balance between digital usage and offline routine life.*

**Keywords:** Consumer Marketing, Consumer Analytics, Ethical Marketing Practices

**INTRODUCTION**

Globally, nearly 2 billion individuals belong to the Gen Z category (Gen Z and Gen Alpha Infographic Update - McCrindle, 2022). They are the first fully global generation, shaped in the 21st century, connected through digital devices, and engaged through social media. This generation has to use multiple innovative tools to access their routine tasks. Unlike the previous generations, Gen Z has to 'log in' right from waking up in the morning to sleeping time. They wake up with an alarm from their smartphone, freshen up with their electronic toothbrush paired with an app, exercise and track fitness progress through the fitness app, and get online with education through educative apps. This generation has to rely on social media to stay connected with each other and get the latest insights and news from around the world. These interactions are mandatory for this generation as they will fail to fulfil their basic tasks if smartphones are withdrawn from their lives (REALITY BYTES: THE DIGITAL EXPERIENCE IS THE HUMAN EXPERIENCE., 2019). While all of these interactions are mandatory for their routine tasks, companies are using their interactions as a category creation and profiling tool to enable higher sales numbers and increase profitability. On average, an individual sees nearly 5000 ads a day (Holmes, 2019). All these advertisements are derived based on the data collected on several online interactions that Gen Z have to go through to fulfil their day-to-day activities. Companies use these interactions to categorise and target ads based on consumer analytics (Mariani and Fosso Wamba, 2020). Consumer analytics is the art and science through which companies can estimate sales, demand and purchase appeal of the product (Liao, Shen and Chu, 2009). Through consumer analytics, companies can create several groups of consumers who get a personalised digital sales pitch influencing the purchase of goods/services (Griva, 2022). Through this categorisation, companies have reported 1150% upward growth in overall digital [not specific to Gen Z] sales and nearly 48% customer retention rates. Apart from that, companies expect a further 53% increase in sales figures for 2023. Since an average user sees about 5000 digital advertisements daily, a study needed to be conducted to understand if this personalised approach is appreciated by the consumer or if this consumer categorisation is adversely affecting the population.

**METHODOLOGY**

This paper has a combination of secondary and primary data sources

The secondary data is collected from websites, publications, books and journals.

The primary data is collected via interviews and questionnaires from 120 Gen Z individuals living in the European Union.

The questionnaire and interview sessions were based on secondary data and included the following questions:

1. How many social media platforms/ apps do you access in a day?
2. How many digital advertisements do you genuinely watch (at least 10% of the total duration)?
3. Do you like getting an advertisement based on your recent search history and other conversations?
4. Are you aware of consumer analytics and the usage of your personal data for personalised targeting?

5. Do you click on the advertisement that you get on your social platforms?
6. How many times would you buy a product suggested by a digital advertisement?
7. Would you prefer paying for an adblocker or similar tools that might keep you away from repetitive advertisements?
8. Does repetitive advertising affect your purchase decision?
9. Would you continue buying from a company that has targeted you with similar ads for a long time?

### STUDIES AND FINDINGS

When asked about - How many social media platforms/ apps do you access in a day? 84% of the respondents replied with more than 6 whereas 12% of respondents replied with 3 as an answer, and 4% of respondents replied with less than 2 social media platforms. This justifies that a Gen Z in European Union is active on at least 6 social media platforms throughout the day. The digital generation has to be online to ensure every activity of the day is in order and tracked regularly. As of 2022, the average daily social media usage of internet users worldwide amounted to 147 minutes per day, up from 145 minutes in the previous year. Western Europe had a 79 percent social media penetration rate, topping the ranking of global social media usage by region (Dixon, 2022).

Many internet users pay a blind eye to digital advertisements. It was essential to understand - How many digital advertisements do you genuinely watch (at least 10% of the total duration)? 62% of respondents responded with less than 50% as an answer, 22% of the respondents responded with less than 10%, and the remainder, 16% of respondents, said that they watch more than 50% of the advertisements for more than 10% of the total advertisement runtime.

This means most of the population skips the advertisement and the message delivered through the ad, whereas 16% of the population watches the ad to understand the product being highlighted. As a business, getting the highest possible returns against the investment made in digital ads is essential. Probably, many companies are being ignored by Gen Z due to repetitive and high ad instances.

The study further investigates by asking - Do you like getting an advertisement based on your recent search history and other conversations?

Interestingly only 15% of the population responded by saying Yes! They liked getting personalised ads, whereas 85% of the population was unhappy with ads based on search history and recent conversations. This could highlight that most of the population is avoiding the digital advertisements seen during their interaction with social platforms. From a company's point of view, this could be a back setback in the outreach strategy, which may affect projected sales and income.

The European Union is strict with the GDPR = General Data Protection Regulation and its compliance by different companies. Despite a strict regime, companies find a way to collect personal and sensitive information from their clients. When asked about - Are you aware of consumer analytics and the usage of your personal data for personalised targeting?

Unsurprisingly, 100% of the respondents said that Yes, they were aware of consumer analytics and personal data usage for personalised targeting. As mentioned previously, Gen Z has to go through several online interactions for day-to-day operations and avoiding these interactions might affect the activities. Gen Z continues to use the internet as an essential survival tool out of minimal choice, and companies are capitalising on internet data points.

Since there is a limited way out of online activities and no cap limits on getting targeted ads, it was crucial to know - Do you click on the advertisement that you get on your social platforms? This question is of high importance as companies invest heavy resources in developing the right digital ad message. As seen previously, only 16% of the population watched the entire ad. The effectiveness of a marketing campaign can be affected due to lower click-through rates.

92% of the respondents replied by selecting the option – NO, I do not click on the ad and just skip through it. 8% of the population selected – Yes, I love exploring the contents of the advertisements. When appropriated and put in practical calculations, these numbers may result in unfavourable outcomes.

When asked about - How many times would you buy a product suggested by a digital advertisement?

76% of the respondents said less than a 50% chance of them purchasing the advertised product, and 24% of the population selected that there was a more than 50% chance of them purchasing the advertised product. Again, less than 50% chances of product purchase prevail over actual product purchase appeal through digital advertisements.

To understand the future scope of developing a business model, the author asked - Would you prefer paying for an adblocker or similar tools that might keep you away from repetitive advertisements?

Interestingly 58% of the population selected No, I wouldn't buy an adblocker service, and 18% chose Maybe, depending on the cost. 14% of the population chose. Yes, I would like to purchase an adblocker service, and 10% of the population chose – I already have an adblocker.

For the scope of the paper, this section isn't discussed in detail.

In response to - Does repetitive advertising affect your purchase decision?

96% of the population selected – Yes, I intend to purchase the product irrespective of the practical need and usage. Only 4% of the population selected – No – I only purchase the things I require.

This clearly highlights that Gen Z is highly impacted by repetitive advertising and is likely to purchase a product when shown regularly. Companies can further capitalise on the digital advertisement to increase product purchase appeal.

The trend completely changed from the previous question results when the audience was asked - Would you continue buying from a company that has targeted you with similar ads for a long time?

This time 88% of the respondents selected – No – Repetitive advertisements reduces the brand value. 10% selected Depends on the product and pricing, whereas 2% selected Yes- This portrays loyalty towards the consumer.

It can be interpreted that repetitive advertisements may increase the product's purchase appeal but adversely affects the brand's identity. A consumer is likely to start disliking a brand or choose other brands if they see the same items or advertisements from the same brands.

## **RECOMMENDATIONS**

Based on this research following recommendations can be drawn

- a. Gen Z's are aware of their data being used for consumer analytics. Since they do not have much choice, they are willing to continue the usage of online tools.
- b. Repetitive targeting can adversely affect purchasing desire and the brand's identity. Companies must test the likability of their featured products before investing resources in digital advertising.
- c. While forecasting sales figures, companies need to look at more comprehensive generations of the population and not restrict themselves to Gen Z.

## **CONCLUSION**

From this study, it can be identified that overreliance on consumer analytics and minute categorisation can adversely affect the brand. Companies should let consumers choose the product based on demand and not only on purchase appeal. Apart from that, one can also conclude that high purchase appeal may or may not result in the sale of goods/services. As an individual, Gen Z should focus on their internet usage and reduce interaction where possible. This will not overburden their choices and give them access to more valuable products that might be useful.

CUSTOMER SATISFACTION WITH INSTAGRAM

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ABSTRACT

The use of social media is prevalent and day by day it is proliferating. These media channels bring content consumers and content creators on a platform. The level of customer satisfaction depends on how much are the customers' needs and priorities nurtured. As there is no dearth of content on these platforms, customers must get the content of their interests which will lead to better user experience as well as creators' experience. Among the social media platforms, Instagram is a platform which is one of the most used ones. It facilitates online communication as well as audio and video content dissemination. Recent studies have shown that Instagram users are increasing and the average time spent has also increased. This study aims at finding the level of customer satisfaction towards Instagram by analyzing user experiences and satisfaction with various features provided by this platform.

INTRODUCTION

With the advancement of digital technologies and the internet, the use of social media has also increased expeditiously. Instagram which is widely used, gets much of its revenue through advertisements. Hence, more customer reach, as well as better experience to retain the existing ones, need to be aimed at. For this, Instagram uses various algorithms and methodologies aiming at apt content curations which would eventually lead to an increase in average time spent on this platform. This results in the need to examine the user experiences and level of satisfaction achieved.

OBJECTIVES

To analyze the Customer Satisfaction with the Social Media app- Instagram

RESEARCH METHODOLOGY:

This research aims at examining user experience and customer satisfaction towards various features of Instagram for which a survey was conducted through google forms (primary data collection). A total of 100 responses were collected.

Also, an analysis of relevant published surveys was done. (Secondary)

Hypothesis

H0: Customers are satisfied with the communicating and content related features of Instagram.

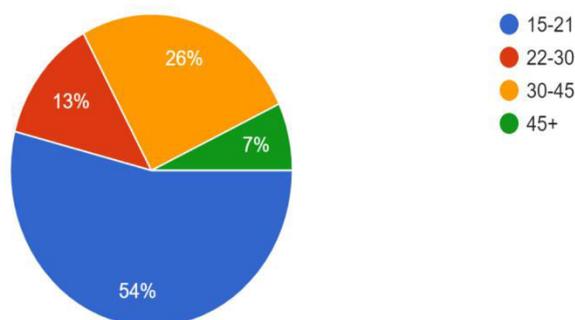
H1: Customers are not satisfied with the communicating and content related features of Instagram.

H0: Customers are satisfied with the security and grievance redressal features of Instagram.

H1: Customers are not satisfied with the security and grievance redressal features of Instagram.

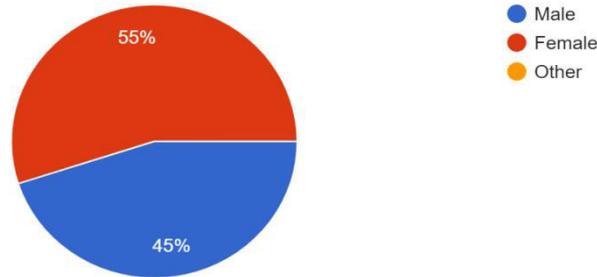
Demography:

Age group  
100 responses



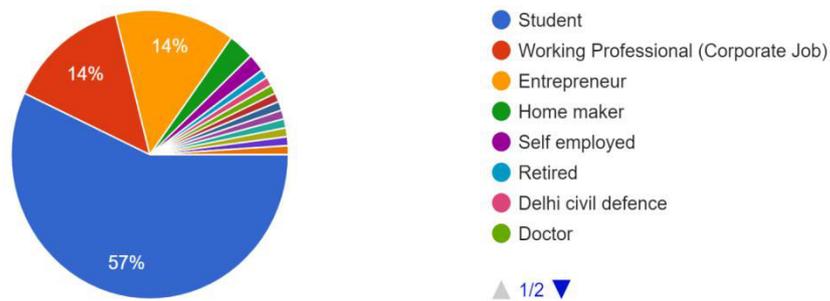
- Most of the respondents (54%) were from the age group 15-21 years. 13% respondents were from the age group 22-30 years. While 26% and 7% respondents were from age groups 30-45 years and 45+ respectively.

Gender  
 100 responses



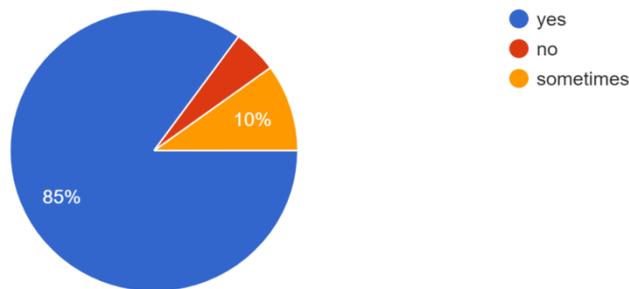
- 55% respondents were female while 45% were male.

Profession  
 100 responses



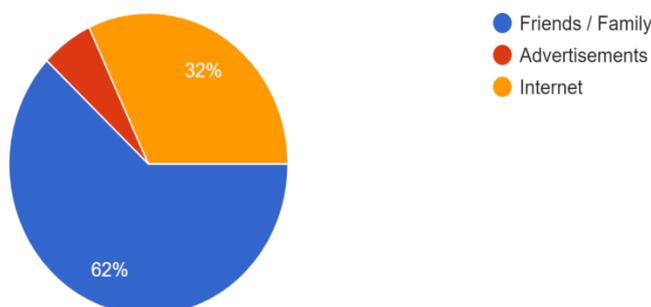
- Maximum responses were received from students ie. 57%, followed by Working professional as well as entrepreneurs at 14% each. Rest other respondents were home makers, doctors, self employed, superannuated, etc.

Do you use the social media app Instagram?  
 100 responses



- Very evidently, maximum respondents used instagram application while only 5% did not.

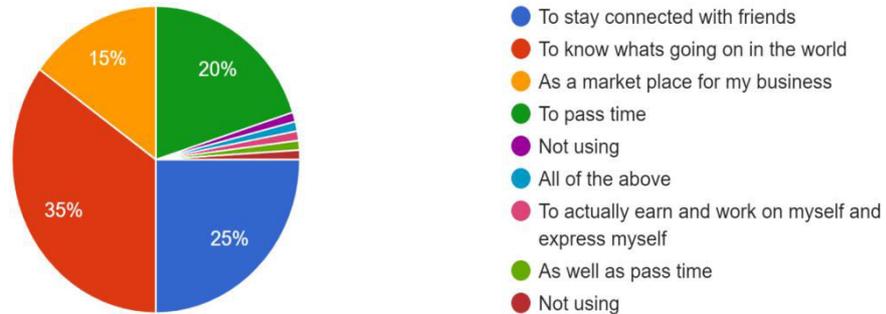
How did you come to know about this social media application?  
 100 responses



- 62% respondents came to know about Instagram through ‘word of mouth’ ie. through family and friends. Rest others, either came to know about it through internet or advertisements.

For what purpose do you use this application ?

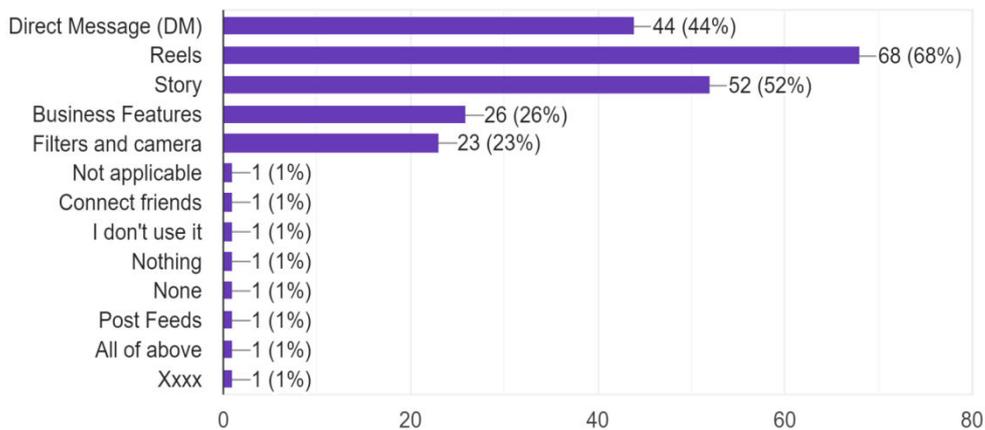
100 responses



- Among the various reasons for which people used Instagram, the top ones were ‘To know more whats going on in the world’ (35%), ‘To stay connected with friends’(25%), ‘To pass time’(20%) and ‘As a market place for their businesses’ (15%).

Which features (of Instagram) are your favourite ?

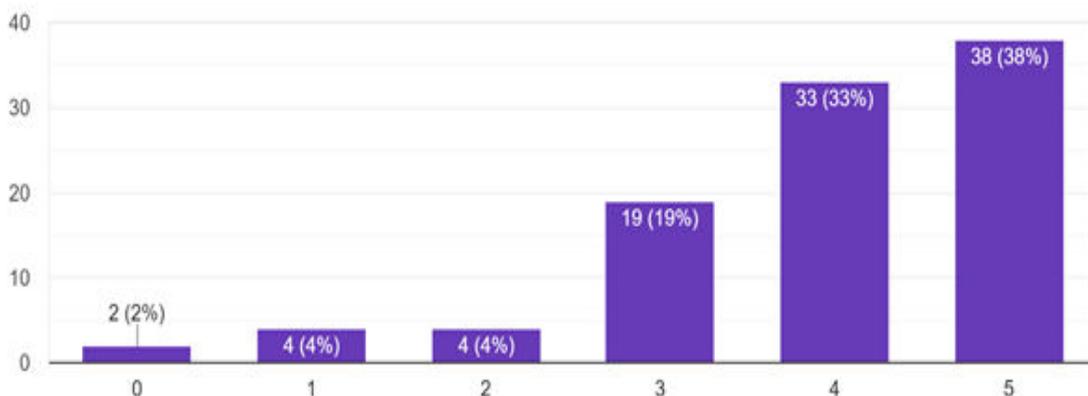
100 responses



- Reels (short videos) were the most favourite of the features as per 68% of the respondents.
- Followed by Direct message and ‘Stories’ features at 44% and 52% respectively.
- Business features and Filters & cameras were among the other favourite features.

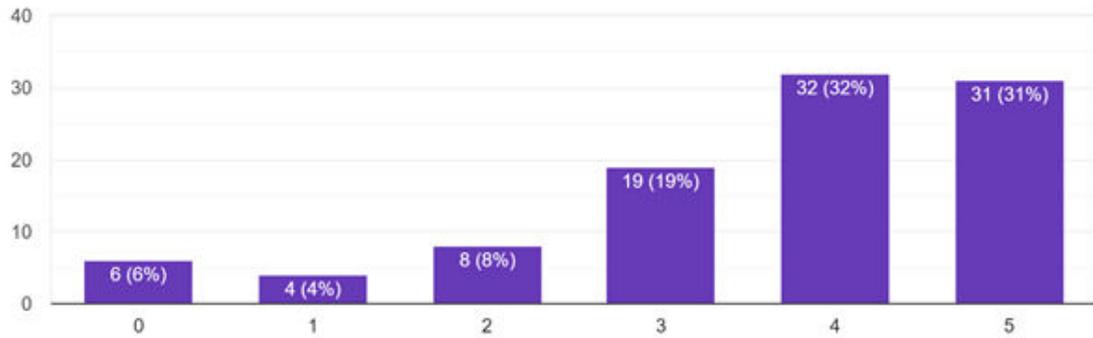
How satisfied are you with the overall interface of Instagram?

100 responses



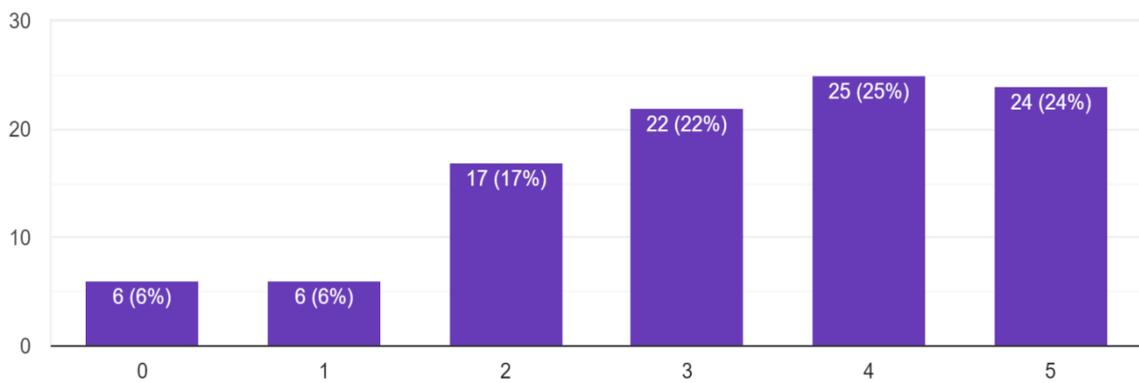
How satisfied are you with the Chatting features of Instagram?

100 responses



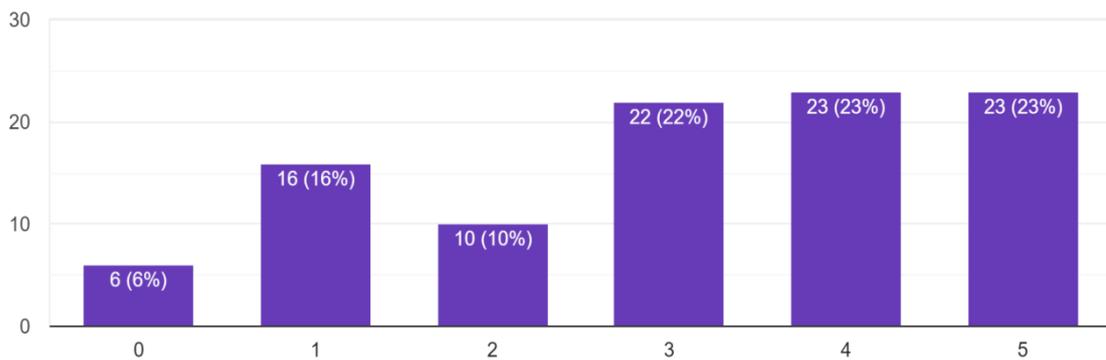
How satisfied are you with the security concerns of Instagram?

100 responses



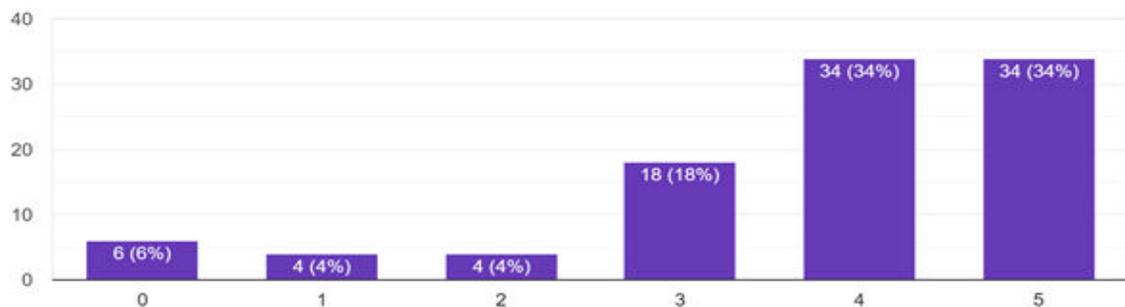
How satisfied are you with the "report" (unethical behaviours) feature of Instagram?

100 responses



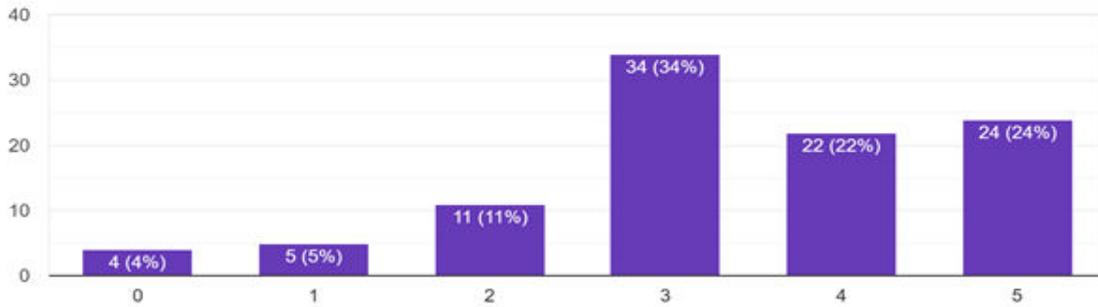
How satisfied are you with the Reels features of Instagram?

100 responses



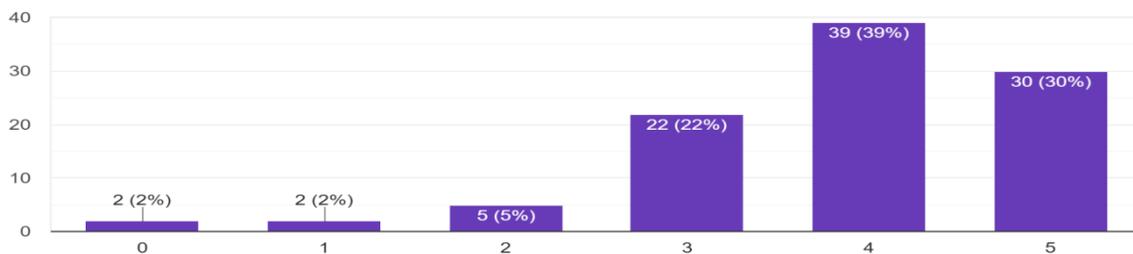
How satisfied are you with the type of content floating on Instagram?

100 responses



How satisfied are you with the Instagram app overall?

100 responses



**Q - How satisfied are you with the overall interface of Instagram?**

**Analysis-** On a scale of 5, 39 out of 100 respondents rated 4 for this question

Average - 3.84

The overall interface of Instagram is satisfactory with easy to comprehend functions and features. Because of the user friendliness of Instagram, even the elderly find it easy to adapt to.

**Q -How satisfied are you with the Chatting features of Instagram?**

**Analysis-** On a scale of 5, 32 out of 100 respondents rated 4 for this question

Average - 3.6

Direct message feature of Instagram offers several options of exchanging text messages, images, videos, audios and Gifs. However, customers suggest that Instagram should also provide the facility of exchanging files and long timed videos.

**Q -How satisfied are you with the Reels features of Instagram?**

**Analysis-** On a scale of 5, 34 out of 100 respondents rated 4 and 5 each for this question

Average - 4.6

Reels have become the most attractive feature of Instagram especially after the ban of tik tok in India. The reels feature is very comprehensive and allows for a huge range of options for the recording and editing of these short videos. According to our survey, customers are highly satisfied with the reels feature.

Reels have a wider reach and thus have tremendously helped business accounts to grow and reach out to a bigger audience resulting in higher sales.

**Q -How satisfied are you with the type of content floating on Instagram?**

**Analysis-** On a scale of 5, 34 out of 100 respondents rated 3 for this question

Average - 3.37

Content available on Instagram is very diverse. People from all walks of life use this application and post about various topics. However, it is difficult to trust the content floating as it has no authenticity and the accuracy of information is not scrutinized by anyone. There are users spreading false information, rumors and spreading hate. Such false information can lead to serious consequences.

**Q -How satisfied are you with the security concerns of Instagram?**

**Analysis-** On a scale of 5, 25 out of 100 respondents rated 4 for this question

Average - 3.26

Security measures of Instagram provide for two factor authentication and sends mails on detecting suspicious activities.

Users do not really trust that Instagram keeps their data safe. Confidential data is not preferred by people to be shared over instagram.

**Q -How satisfied are you with the "report" (unethical behaviours) feature of Instagram?**

**Analysis-** On a scale of 5, 23 out of 100 respondents rated 4 and 5 each for this question

Average - 3.09

Instagram provides the option of reporting unethical activity. However, most of the participants do not find the redressal of their grievances to be effective.

**Q- How satisfied are you with the Instagram app overall?**

**Analysis-** On a scale of 5, 39 out of 100 respondents rated 4 for this question

Average - 3.84

Overall Instagram stands out to one of the most used app and can also be said to be the Social Media App of this generation. Participants show an overall satisfaction with the app.

**What suggestions do you have for Instagram as a customer?**

**Analysis-**

- Release a guidebook on algorithms for reels
- Please delete the accounts on which vulgar posts are there.
- To clear the bugs, improve the report system and work on copyright tags.
- Bring back the tag message option and more reactions on messages, posts, reels shared
- Please expand story time
- Earlier in my beta update, one could pause the reel by just clicking on it and on reading the comments, it would get paused on its own but in my case, it's not working anymore and I would be glad if they add this feature again
- Have seamless payment experience for content promotion and ads
- Remove reels section
- The developer should increase the app performance and should also work to fix as it contains some bugs and glitch.
- Keep a standard algorithm for promoting artists. Also, ensure to validate the legitimacy of an artist.
- It shud be more reachable at a lower cost for paid ads ..have a different section for social and business

**Q- Have you ever reported complaints on Instagram? Did you get appropriate redressal for your grievances?**

- Yes, but the response was not satisfying.
- Yes and got appropriate response too
- Yes , I've got proper redressal for my grievance

Yes I did but reporting a fake account comes to be a hurdle here. You have to choose the suspicious account who might be the imposter of mine or the person's account. At times you don't always know who might be suspicious and it becomes difficult to report a fake account

- Yes I have reported! Yes I have got appropriate redressal for my grievances

- No, people are using vulgar and inappropriate languages and even after reporting the issue, Instagram is not doing anything about it.

### Secondary Data

- According to Semrush, a digital marketing platform,, Instagram is one of the world's top 10 most-visited websites globally. It has 2.9 billion total visits per month. Internet users aged 16 to 24 prefer Instagram to other social platforms like tik tok and facebook.. This shows that instagram definitely has a huge user base.
- India has the highest number of Instagram users in the world. Increasing its audience by 16% quarter-over-quarter, India is the fastest growing market for Instagram at present. Thus, survey data from India will be able to serve as reliable statistics
- Only 10 percent of U.S. adults agree that they seek out news on Instagram — and 42% distrust it as an information source, this shows dissatisfaction among users towards the kind of content floating on Instagram.
- 50% of Instagram users say they've gone ahead and actually visited a website to make a purchase of a product or service after seeing it in Stories. It can thus be inferred that users of Instagram are satisfied with the story feature of instagram.

Source- <https://www.semrush.com/blog/instagram-stats/>

Park et al. pointed out entertainment as a factor in overall user satisfaction on social media. Oliveira et al. , defined entertainment as a certain level of pleasure, fun or relaxation obtained when using a certain social medium. Instagram is a social media that many people use as a hobby (Alhabash and Ma, 2017), looking for content that pleases them without necessarily bringing any intellectual or social benefit. Within the U&G theory, entertainment is seen as one of the most recurring rewards that a user receives when using social media (Whiting and Williams, 2013;Kim and Kim, 2019). Within the Instagram environment, the visual appeal of publications is strong, offering attractive content (Pelletier et al., 2020) which enhances entertainment as a bonus to be sought by the user.

Satisfaction has become a central element in the analysis of consumer behavior (Casaloet al., 2011,2017b). In a study by Bhattacharjee (2001), satisfaction was identified as the strongest reason for continued use of information systems (such as social media), making it possible to generate a continuous user relationship with the virtual community. Similar findings were obtained in studies by Casal oet al. (2011,2017b), who pointed to satisfaction with past consumer experiences in the use of social networks as a predictor of behavioral intention.

From the U&G theory, a user's satisfaction with his or her use of Instagram can induce behaviors in the user, such as causing him or her to follow accounts and interact with other users. According to Casal oet al. (2017a), this is because the satisfaction obtained by the user when visiting a certain social network account exceeds his/her expectations. Consequently, within the continuity of use model (Bhattacharjee, 2001), the satisfied user continues to use the platform, which, in the case of Instagram, means following and interacting with other user accounts.

Bhattacharjee, A. (2001), "Understanding information systems continuance: an expectation

### CONCLUSION

From the primary and secondary data, it can be derived that Instagram's users are satisfied with the communication related features of Instagram. While majority users are satisfied with the grievance redressal features, there persists a sense of insecurity among users regarding the privacy of their data. Content floating on instagram needs more policing and stricter norms in order to establish good standards of content which will help the app build more confidence among users as a source of valid information. We can also observe that business profile users and artists expect more support from instagram to help them grow and reach a wider audience.

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**ENHANCING PERFORMANCE APPRAISAL SYSTEMS IN INDIAN BANKS: A COMPREHENSIVE STUDY**

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**ABSTRACT**

*This study presents a comprehensive analysis of the performance appraisal systems in Indian banks and explores strategies for enhancing their effectiveness. Performance appraisal plays a crucial role in evaluating employee performance, providing feedback, and facilitating their professional development. However, the existing systems in Indian banks may face certain challenges that hinder their efficacy. Through an in-depth examination of these challenges and their impact, this study aims to identify key areas for improvement. The research methodology includes a combination of qualitative and quantitative approaches, including surveys, interviews, and case studies. The study findings highlight the significance of aligning performance appraisal systems with the unique context of Indian banks, such as cultural factors, organizational structures, and regulatory requirements. Furthermore, key recommendations are provided to enhance the objectivity, fairness, and transparency of the appraisal systems, thereby fostering a performance-driven culture within Indian banks.*

**Keywords:** *Performance appraisal, Indian banks, effectiveness, challenges, improvement strategies, employee performance, feedback, professional development, cultural factors, organizational structures, regulatory requirements, objectivity, fairness, transparency, performance-driven culture.*

**INTRODUCTION**

Performance appraisal is a vital process within organizations, including Indian banks, as it serves multiple purposes such as evaluating employee performance, providing feedback, and facilitating their professional growth. The effectiveness of performance appraisal systems directly impacts employee motivation, productivity, and overall organizational performance. Therefore, it is crucial for Indian banks to have robust appraisal systems in place that accurately measure employee contributions and align them with organizational objectives.

However, the existing performance appraisal systems in Indian banks may face certain challenges that hinder their effectiveness. These challenges can range from subjective evaluation criteria to biases in the appraisal process, cultural influences, and organizational structures. In order to address these challenges and enhance the performance appraisal systems, a comprehensive study is needed to identify areas for improvement and develop strategies that are tailored to the unique context of Indian banks.

The objective of this study is to conduct an in-depth analysis of the performance appraisal systems in Indian banks and propose recommendations to enhance their efficacy. By examining the existing practices, identifying challenges, and exploring potential improvement strategies, this study aims to contribute to the development of fair, transparent, and objective performance appraisal systems that promote a performance-driven culture within Indian banks.

To achieve this objective, a mixed-methods research approach will be employed, combining qualitative and quantitative methods. Surveys will be conducted to gather data from employees at various levels within Indian banks, and interviews will be conducted with HR professionals and managers responsible for performance appraisal processes. In addition, case studies of select Indian banks will be conducted to gain deeper insights into their specific approaches and challenges.

The findings of this study will provide valuable insights into the existing performance appraisal systems in Indian banks, their strengths, weaknesses, and areas for improvement. By addressing the identified challenges and implementing the recommended strategies, Indian banks can enhance the objectivity, fairness, and transparency of their performance appraisal systems, thereby fostering a performance-driven culture and motivating employees to achieve higher levels of productivity and excellence.

In the following sections of this study, we will delve into the specific challenges faced by Indian banks in performance appraisal, explore the factors influencing these challenges, and propose strategies for enhancing the effectiveness of performance appraisal systems in Indian banks.

**BACKGROUND OF THE STUDY:**

Performance appraisal is a crucial aspect of human resource management in organizations worldwide, including the banking sector. It involves evaluating employee performance, providing constructive feedback, and

identifying opportunities for growth and development. The effectiveness of performance appraisal systems directly impacts employee motivation, job satisfaction, and overall organizational performance.

In the context of Indian banks, performance appraisal systems play a significant role in assessing the performance of employees across various roles and functions. These systems help banks identify top performers, reward high achievers, and address performance issues. However, the existing performance appraisal systems in Indian banks may face certain challenges that limit their effectiveness and hinder the achievement of desired outcomes.

One of the challenges in performance appraisal within Indian banks is the subjective nature of evaluation criteria. Traditional appraisal methods often rely on subjective judgment, leading to potential biases and inconsistencies in evaluations. The lack of standardized and objective criteria for performance assessment can create ambiguity and unfairness, impacting employee morale and motivation.

Cultural factors also influence performance appraisal in Indian banks. India's diverse cultural landscape, with its emphasis on respect for authority and hierarchical structures, can affect the way performance appraisal is conducted. Cultural influences may lead to a reluctance to provide constructive feedback, hinder open communication, and create a preference for maintaining harmony over addressing performance issues.

Furthermore, the complex organizational structures within Indian banks, which may include multiple branches, regional offices, and hierarchical layers, pose challenges to effective performance appraisal. Ensuring consistency and fairness across various locations and departments becomes a significant concern, especially when there is a lack of standardized evaluation processes and clear performance metrics.

Additionally, Indian banks operate in a highly regulated environment, governed by regulatory bodies such as the Reserve Bank of India (RBI). These regulations impact the design and implementation of performance appraisal systems, requiring banks to adhere to certain guidelines and reporting requirements. Aligning performance appraisal practices with regulatory requirements while maintaining objectivity and fairness becomes a critical consideration for Indian banks.

Given the challenges mentioned above, there is a need for a comprehensive study to examine and enhance the performance appraisal systems in Indian banks. Such a study will provide insights into the specific challenges faced by Indian banks, their underlying causes, and potential strategies to improve the effectiveness of performance appraisal. By addressing these challenges, Indian banks can establish fair, transparent, and objective appraisal systems that align employee performance with organizational goals, foster a performance-driven culture, and ultimately contribute to their success in a competitive banking sector.

#### **RESEARCH PAPER OBJECTIVE:**

The objective of this research paper is to conduct a comprehensive study on enhancing the performance appraisal systems in Indian banks. The study aims to achieve the following specific objectives:

- Identify the existing challenges and limitations in the performance appraisal systems employed by Indian banks.
- Understand the cultural, organizational, and regulatory factors that influence the effectiveness of performance appraisal in Indian banks.
- Explore best practices and innovative approaches to performance appraisal from global banking institutions.
- Examine the impact of performance appraisal on employee motivation, job satisfaction, and overall organizational performance within Indian banks.
- Analyze the perception of employees, managers, and HR professionals regarding the fairness, transparency, and objectivity of current performance appraisal systems.
- Develop recommendations and strategies to address the identified challenges and enhance the effectiveness of performance appraisal systems in Indian banks.
- Provide practical insights and guidance to Indian banks for implementing improvements in their performance appraisal processes.
- Foster a performance-driven culture within Indian banks by aligning performance appraisal systems with organizational objectives and employee development goals.

By accomplishing these objectives, this research paper aims to contribute to the existing body of knowledge on performance appraisal in Indian banks and provide practical recommendations that can be implemented to enhance the effectiveness of appraisal systems. The findings of this study will assist Indian banks in designing and implementing fair, transparent, and objective performance appraisal processes, thereby improving employee motivation, engagement, and overall organizational performance.

Hypothesis:

H1: The subjective nature of evaluation criteria in performance appraisal systems within Indian banks negatively affects the fairness and objectivity of the process.

H2: Cultural factors, such as a preference for maintaining harmony and respect for authority, influence performance appraisal practices in Indian banks, impacting the quality of feedback and openness in communication.

H3: The complex organizational structures of Indian banks pose challenges to ensuring consistency and fairness in performance appraisal across various locations and departments.

H4: Regulatory requirements in the Indian banking sector influence the design and implementation of performance appraisal systems, necessitating alignment with guidelines and reporting standards.

H5: Effective performance appraisal positively impacts employee motivation, job satisfaction, and overall organizational performance within Indian banks.

H6: Employees, managers, and HR professionals perceive the current performance appraisal systems in Indian banks to have limitations in terms of fairness, transparency, and objectivity.

H7: Implementation of recommended strategies to enhance performance appraisal systems will lead to improved employee motivation, engagement, and overall organizational performance in Indian banks.

These hypotheses will guide the research and analysis process to investigate the specific aspects and impact of performance appraisal systems in Indian banks, and test the effectiveness of proposed strategies for enhancement. The study will employ a combination of qualitative and quantitative research methods to gather data and analyze the findings, allowing for a comprehensive evaluation of the hypotheses.

#### **RATIONALE OF THE STUDY:**

The rationale for conducting a comprehensive study on enhancing performance appraisal systems in Indian banks is driven by the need to address the challenges and limitations that exist in the current practices. By improving the effectiveness of performance appraisal, Indian banks can enhance employee motivation, job satisfaction, and overall organizational performance, ultimately gaining a competitive edge in the banking sector.

Firstly, the subjective nature of evaluation criteria in performance appraisal systems poses a significant challenge in ensuring fairness and objectivity. By examining this issue, the study aims to provide insights into the impact of subjective evaluations on employee morale and motivation, and propose strategies to introduce more objective criteria and evaluation processes.

Secondly, cultural factors influence the performance appraisal practices in Indian banks. Understanding the impact of cultural influences, such as a preference for maintaining harmony and respect for authority, will help identify areas where adjustments can be made to promote open communication, constructive feedback, and a performance-driven culture within the banks.

Thirdly, the complex organizational structures of Indian banks create challenges in maintaining consistency and fairness across various locations and departments. The study aims to explore these challenges and provide recommendations on how to overcome them, ensuring that performance appraisal processes are standardized, transparent, and equitable throughout the organization.

Furthermore, the regulatory requirements within the Indian banking sector add another layer of complexity to performance appraisal systems. By examining the impact of regulatory guidelines on performance appraisal practices, the study will provide insights into aligning appraisal processes with regulatory requirements while maintaining fairness and objectivity.

The study also recognizes the importance of effective performance appraisal in driving employee motivation, job satisfaction, and overall organizational performance. By investigating the impact of performance appraisal

on these factors, the study aims to highlight the significance of enhancing appraisal systems to create a positive and productive work environment within Indian banks.

Finally, the study acknowledges the perceptions and feedback of employees, managers, and HR professionals regarding the current performance appraisal systems. By incorporating their perspectives, the study will provide valuable insights into the limitations and areas for improvement, ensuring that the proposed strategies are aligned with the expectations and needs of the stakeholders.

Overall, the rationale of this study is to contribute to the existing knowledge base on performance appraisal in Indian banks and provide practical recommendations for enhancing the effectiveness of appraisal systems. By addressing the identified challenges and limitations, Indian banks can establish fair, transparent, and objective performance appraisal processes that align with organizational goals, promote employee development, and contribute to overall organizational success.

## **REVIEW OF LITERATURE**

Agrawal, R., & Gupta, P. (2019). Performance Appraisal System in Banking Sector: A Comparative Study of Indian and Foreign Banks. *Journal of Management Research*, 19(2), 119-139. This study compares the performance appraisal systems of Indian banks with those of foreign banks. It identifies the strengths and weaknesses of both systems and provides insights into best practices that can be adopted by Indian banks to enhance their performance appraisal processes.

Basu, S., & Dass, M. (2016). Performance Appraisal Systems in Public and Private Banks: A Comparative Study. *International Journal of Bank Marketing*, 34(3), 362-383. The authors compare the performance appraisal systems in public and private banks in India. The study examines the impact of different systems on employee motivation and job satisfaction, highlighting the need for improvements in the appraisal processes of public banks.

Goyal, N., & Saini, G. R. (2017). An Empirical Study of Performance Appraisal System in Selected Public and Private Sector Banks of India. *Paradigm*, 21(2), 174-188. This empirical study investigates the performance appraisal systems in selected public and private sector banks in India. The research explores the perceptions of employees and managers regarding the fairness, transparency, and effectiveness of these systems, providing insights into areas for improvement.

Joshi, P., & Pathak, R. (2019). Performance Appraisal System: A Comparative Study of Public and Private Sector Banks in India. *Vision*, 23(1), 44-54. This study compares the performance appraisal systems in public and private sector banks in India. It examines the impact of these systems on employee motivation and job satisfaction, highlighting the need for a more objective and transparent appraisal process across both sectors.

Khan, I. A., & Rajput, N. (2018). Comparative Analysis of Performance Appraisal Systems in Public and Private Sector Banks. *Journal of Business and Economic Policy*, 5(2), 51-59. This research paper provides a comparative analysis of performance appraisal systems in public and private sector banks in India. It highlights the importance of aligning performance appraisal processes with organizational goals and suggests strategies for enhancing the effectiveness of appraisal systems.

Kumar, M., & Rathi, N. (2019). Performance Appraisal Practices in Indian Banks: A Study of Employee Perspectives. *Global Business Review*, 20(6), 1471-1486. This study explores the perspectives of employees regarding the performance appraisal practices in Indian banks. It examines their perceptions of fairness, transparency, and the impact of these practices on their motivation and job satisfaction, providing valuable insights for enhancing the appraisal systems.

Rana, J., & Kumar, P. (2020). Performance Appraisal in Public and Private Sector Banks in India: A Comparative Analysis. *International Journal of Engineering and Management Research*, 10(4), 40-45. The authors conduct a comparative analysis of performance appraisal systems in public and private sector banks in India. The study highlights the need for more objective evaluation criteria, feedback mechanisms, and employee involvement in the appraisal process to enhance its effectiveness.

Sharma, P., & Bansal, R. (2018). Performance Appraisal in Public and Private Sector Banks: A Comparative Study. *Indian Journal of Commerce and Management Studies*, 9(1), 21-27. This study compares the performance appraisal practices in public and private sector banks in India. It analyzes the strengths and weaknesses of both systems and provides recommendations for improving the appraisal process, such as enhancing communication, setting clear performance metrics, and ensuring fairness.

Sharma, S., & Roy, S. (2017). Comparative Analysis of Performance Appraisal Practices in Public and Private Sector Banks in India. *International Journal of Engineering Technology Science and Research*, 4(5), 241-247. This comparative analysis examines the performance appraisal practices in public and private sector banks in India. The study identifies the gaps and challenges in the appraisal systems and suggests strategies for improving the effectiveness, fairness, and transparency of the process.

Shukla, A., & Patel, B. C. (2020). Performance Appraisal System in Banking Industry: A Comparative Study of Public and Private Sector Banks in India. *Asian Journal of Multidimensional Research*, 9(6), 71-82. This comparative study investigates the performance appraisal systems in public and private sector banks in India. It analyzes the impact of these systems on employee motivation and satisfaction, and provides insights into the areas where improvements can be made to enhance the appraisal process.

These selected studies provide a foundation for the comprehensive study on enhancing performance appraisal systems in Indian banks. They offer insights into the existing practices, challenges, and recommendations for improving the effectiveness, fairness, and objectivity of appraisal systems in the banking sector.

### **RESEARCH METHODOLOGY:**

The comprehensive study on enhancing performance appraisal systems in Indian banks will employ a mixed-methods research approach, combining both secondary research and primary data collection. This methodology will enable a thorough analysis of existing literature and provide an opportunity to gather firsthand insights from employees, managers, and HR professionals in Indian banks.

#### **Secondary Research**

The study will begin with an extensive review of relevant literature, including academic research papers, articles, books, and industry reports. This secondary research will help establish a theoretical foundation, identify key concepts, and understand the existing knowledge and practices related to performance appraisal in Indian banks. The literature review will focus on topics such as performance appraisal systems, challenges and limitations, cultural influences, organizational structures, regulatory requirements, and best practices from the banking sector globally. The findings from secondary research will serve as a basis for developing research questions, hypotheses, and identifying gaps in the literature.

#### **Primary Data Collection**

To gather primary data, a combination of surveys and interviews will be conducted. Surveys will be distributed to employees at various levels within Indian banks, including front-line staff, middle managers, and senior executives. The survey will consist of questions related to their perceptions and experiences with the performance appraisal systems, including fairness, transparency, objectivity, and the impact on motivation and job satisfaction. The data collected from surveys will be analyzed using statistical techniques to draw quantitative insights.

In addition to surveys, interviews will be conducted with HR professionals and managers responsible for performance appraisal processes in Indian banks. These interviews will provide in-depth qualitative insights into the challenges, best practices, and recommendations for enhancing performance appraisal systems. The interviews will be semi-structured, allowing for a flexible and exploratory discussion around the topic. The qualitative data from interviews will be analyzed thematically to extract key findings and themes.

#### **Data Analysis and Findings**

The collected data from both surveys and interviews will be analyzed to identify patterns, trends, and common themes. The quantitative data from surveys will be analyzed using statistical software to generate descriptive statistics, correlations, and inferential analysis. The qualitative data from interviews will be transcribed, coded, and thematically analyzed to extract meaningful insights. The findings from both the quantitative and qualitative analysis will be triangulated to provide a comprehensive understanding of the challenges and recommendations for enhancing performance appraisal systems in Indian banks.

Overall, this research methodology combines secondary research to establish a theoretical foundation and primary data collection to gain firsthand insights from employees and professionals in Indian banks. By integrating both quantitative and qualitative analysis, the study aims to provide a robust and comprehensive understanding of the performance appraisal systems in Indian banks and develop practical recommendations for their enhancement.

### **LIMITATIONS OF THE STUDY**

While conducting a comprehensive study on enhancing performance appraisal systems in Indian banks, there are several limitations that need to be acknowledged:

- **Generalizability:** The findings and recommendations of the study may be specific to the Indian banking context and may not be directly applicable to other industries or countries. The unique characteristics of Indian banks, such as cultural factors, organizational structures, and regulatory requirements, may limit the generalizability of the study's findings to a broader context. Caution should be exercised when extrapolating the results to different settings.
- **Sample Size and Representativeness:** The study's findings may be influenced by the sample size and representativeness of the participants. Due to practical constraints, it may not be possible to include a large and diverse sample from all Indian banks. The study may focus on a specific region or select a limited number of banks, which may affect the representativeness of the findings. The results may be more applicable to the included participants but may not reflect the perspectives and experiences of individuals from other banks.
- **Self-reporting Bias:** The data collected through surveys and interviews may be subject to self-reporting bias. Participants may provide socially desirable responses or may not accurately recall their experiences and perceptions of the performance appraisal systems. To minimize this bias, measures such as ensuring anonymity and confidentiality will be taken, but the potential for self-reporting bias cannot be entirely eliminated.
- **Time Constraints:** Conducting a comprehensive study on performance appraisal systems in Indian banks may be subject to time constraints. The study may not have the resources or timeframe to investigate every aspect of performance appraisal comprehensively. As a result, certain aspects or subtopics may receive less attention or depth of analysis, limiting the overall scope and completeness of the study.
- **Limited Accessibility of Information:** The study's findings may be influenced by the availability and accessibility of relevant information and data. Some banks may not be willing or able to share internal data or provide access to their performance appraisal systems. This limitation may impact the completeness and accuracy of the study's findings.

Despite these limitations, the study aims to provide valuable insights and recommendations for enhancing performance appraisal systems in Indian banks. The limitations will be acknowledged and efforts will be made to mitigate their impact on the validity and reliability of the study's findings.

#### **SUGGESTIONS FOR FURTHER RESEARCH:**

While the comprehensive study on enhancing performance appraisal systems in Indian banks provides valuable insights and recommendations, there are several areas that warrant further research. These suggestions aim to expand the knowledge base and address gaps that may not have been fully explored in the current study:

- **Longitudinal Study:** Conducting a longitudinal study to examine the long-term impact of enhanced performance appraisal systems in Indian banks would provide valuable insights. This research could track the changes in employee motivation, job satisfaction, and organizational performance over an extended period of time to assess the sustained effectiveness of the recommended strategies.
- **Comparative Analysis:** A comparative analysis of performance appraisal systems across different sectors in India, beyond just the banking industry, would contribute to a broader understanding of best practices and challenges. Comparing the effectiveness of appraisal systems in sectors such as manufacturing, IT, or healthcare could identify sector-specific factors that influence performance appraisal and shed light on transferable practices.
- **Impact on Employee Development:** Further research could explore the impact of enhanced performance appraisal systems on employee development and skill enhancement. This research could investigate the extent to which performance appraisal systems facilitate employee learning, growth, and career advancement within Indian banks. Understanding how performance appraisal contributes to employee development would help design more effective performance management processes.
- **Technological Integration:** Investigating the role of technology in enhancing performance appraisal systems could be a valuable area of research. Exploring the use of digital tools, data analytics, and automation in performance appraisal could provide insights into how technology can streamline the process, increase objectivity, and improve the overall effectiveness of performance appraisal in Indian banks.

- **Employee Perspectives on Appraisal System Design:** Conducting research specifically focused on gathering employee perspectives on the design and implementation of performance appraisal systems would provide valuable insights. This could involve exploring their preferences for evaluation criteria, feedback mechanisms, and involvement in the appraisal process. Understanding employee perceptions and preferences can help tailor the appraisal systems to align with their needs and expectations.
- **Impact of Performance Appraisal on Diversity and Inclusion:** Examining the impact of performance appraisal systems on diversity and inclusion in Indian banks would be an important area of research. Investigating whether performance appraisal processes inadvertently disadvantage certain groups and exploring strategies to ensure fairness and mitigate bias would contribute to promoting diversity and inclusivity within the banking sector.

These suggestions for further research aim to expand the understanding of performance appraisal systems in Indian banks and explore specific areas that have not been fully explored in the current study. Addressing these research gaps would contribute to the ongoing efforts to enhance performance appraisal practices and improve organizational outcomes in the banking industry.

## CONCLUSION

The comprehensive study on enhancing performance appraisal systems in Indian banks has provided valuable insights into the current practices, challenges, and opportunities for improvement in performance appraisal processes. Through a combination of secondary research and primary data collection, the study has explored the perceptions and experiences of employees, managers, and HR professionals in Indian banks, aiming to develop practical recommendations for enhancing performance appraisal systems.

The study has highlighted the significance of performance appraisal systems in the banking sector and their impact on employee motivation, job satisfaction, and overall organizational performance. It has identified several key findings:

**The need for enhanced fairness and transparency:** The study has revealed that employees value fairness and transparency in the performance appraisal process. Ensuring clear evaluation criteria, unbiased feedback, and open communication can contribute to a more effective and satisfactory appraisal experience.

**The importance of employee involvement:** The study has emphasized the significance of involving employees in the performance appraisal process. Providing opportunities for self-assessment, goal-setting, and continuous feedback can empower employees and increase their engagement in the appraisal process.

**The role of technology in enhancing performance appraisal:** The study has highlighted the potential benefits of leveraging technology in performance appraisal systems. Integrating digital tools, data analytics, and automation can streamline the process, reduce biases, and provide real-time insights for more informed decision-making.

**The impact of cultural factors:** The study has acknowledged the influence of cultural factors on performance appraisal practices in Indian banks. Recognizing cultural nuances and adapting the appraisal systems to align with cultural values and expectations can enhance their effectiveness and acceptance among employees.

Based on these findings, the study puts forward recommendations for enhancing performance appraisal systems in Indian banks. These recommendations include fostering a culture of feedback and continuous improvement, incorporating employee development plans within the appraisal process, integrating technology for more efficient and objective evaluations, and promoting diversity and inclusion in the appraisal practices.

Overall, the comprehensive study has shed light on the current state of performance appraisal systems in Indian banks and provided valuable insights for their enhancement. By addressing the identified challenges and implementing the recommended strategies, Indian banks can foster a more effective, fair, and employee-centric performance appraisal process, ultimately contributing to improved organizational outcomes and employee satisfaction.

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### • **Multiple author journal article:**

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Uddin, K. (2000). A Study of Corporate Governance in a Developing Country: A Case of Bangladesh (Unpublished Dissertation). Lingnan University, Hong Kong.

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- **Article in magazine:**

Holloway, M. (2005, August 6). When extinct isn't. *Scientific American*, 293, 22-23.

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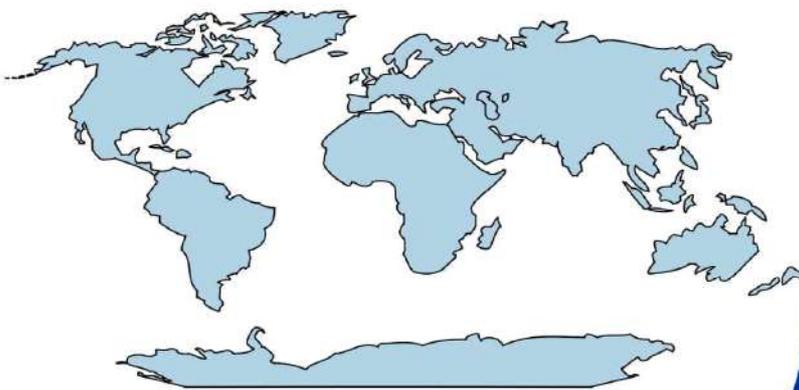
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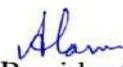
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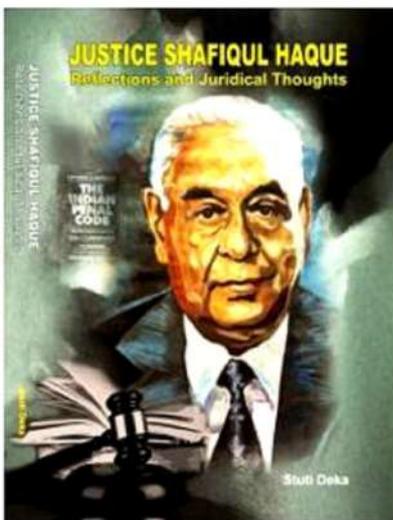


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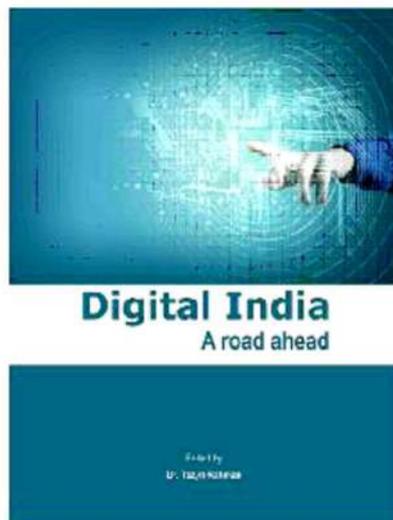
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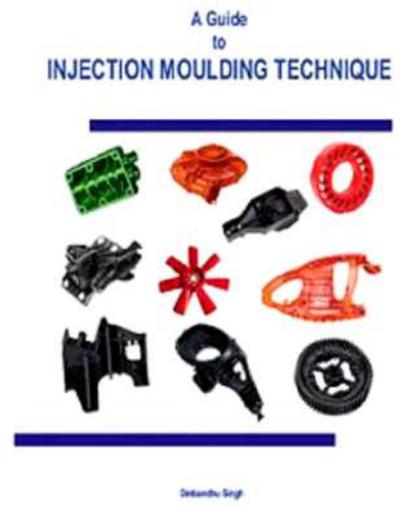
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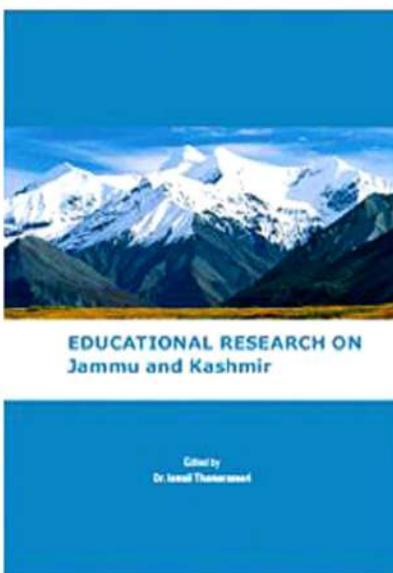
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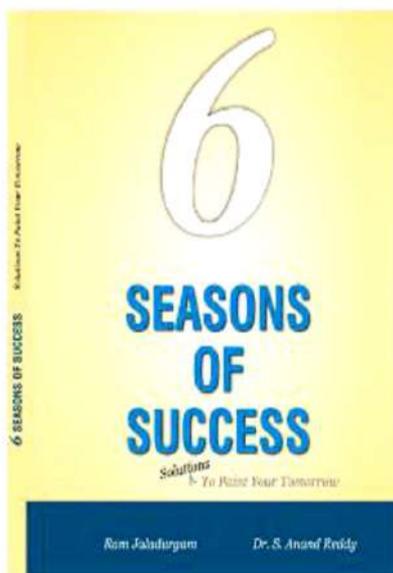
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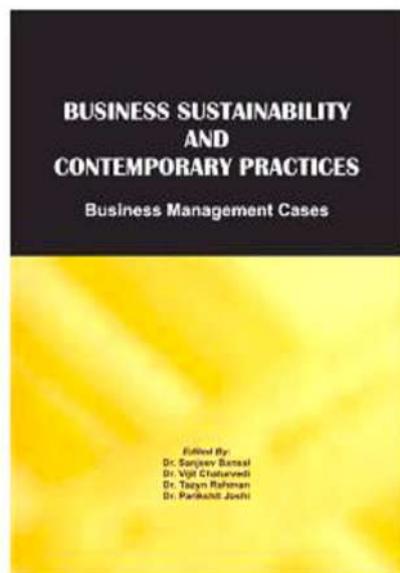
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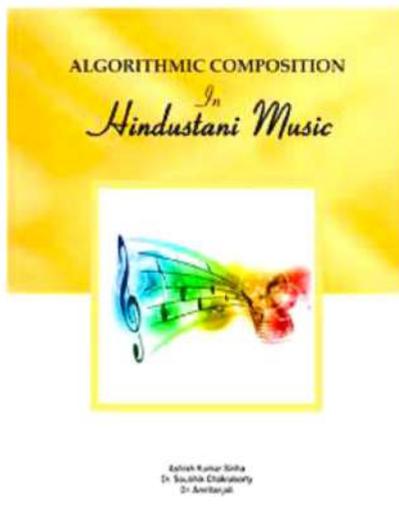
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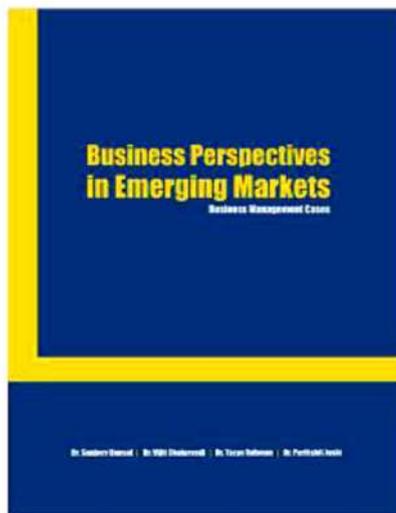
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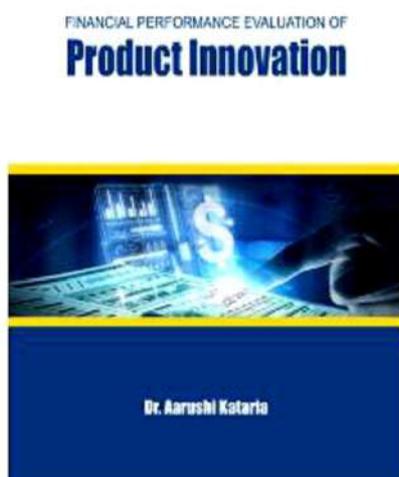
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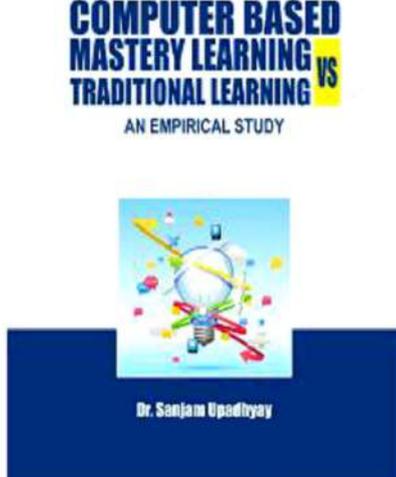
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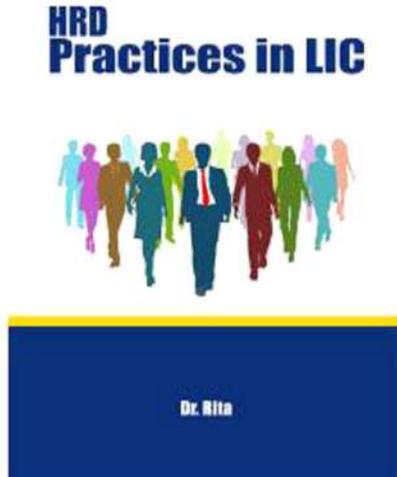
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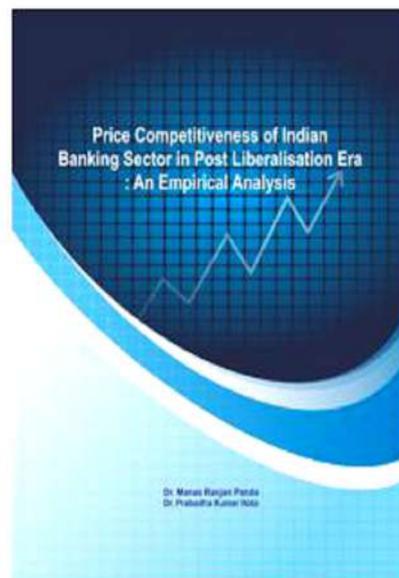
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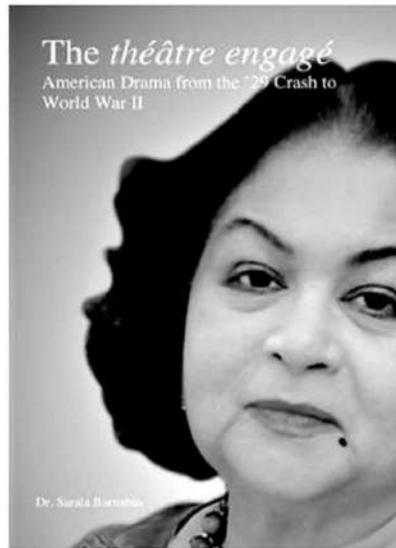
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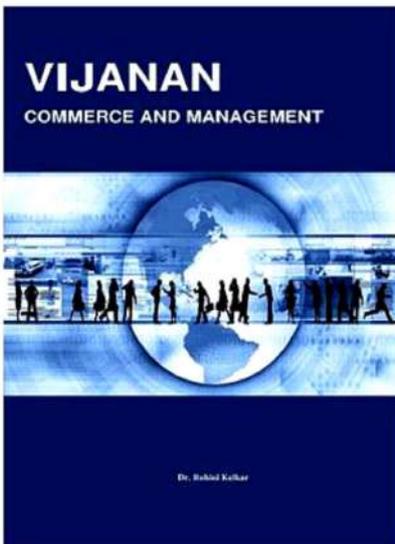
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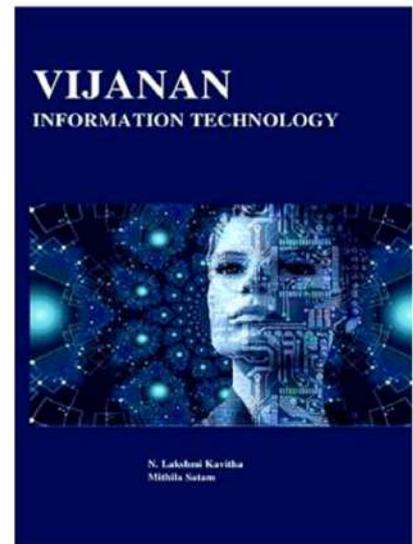
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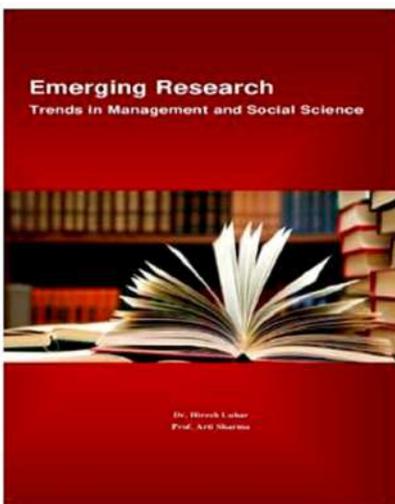
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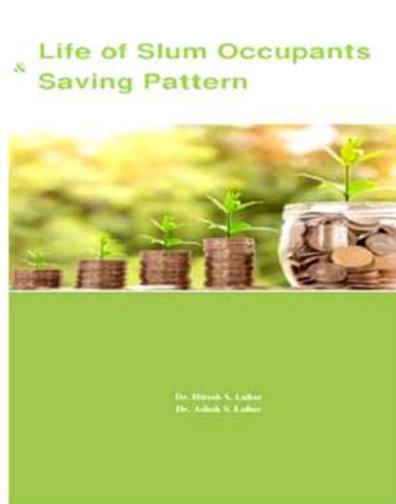
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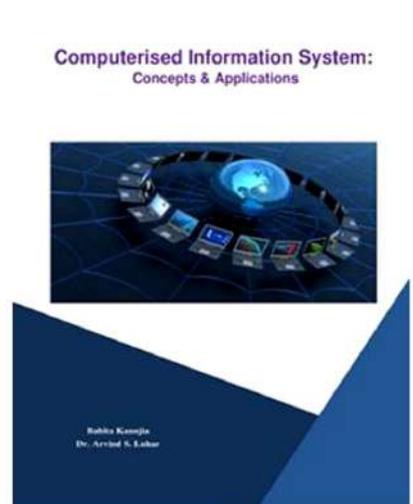
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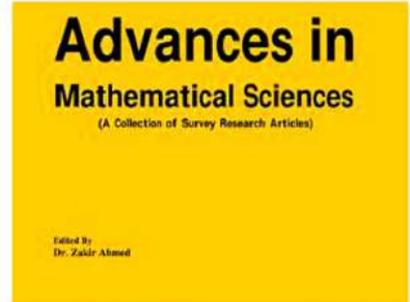
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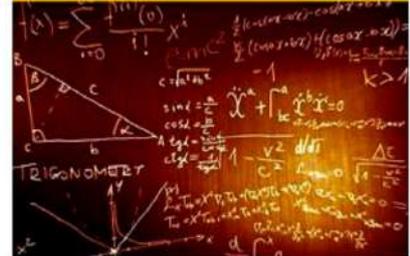
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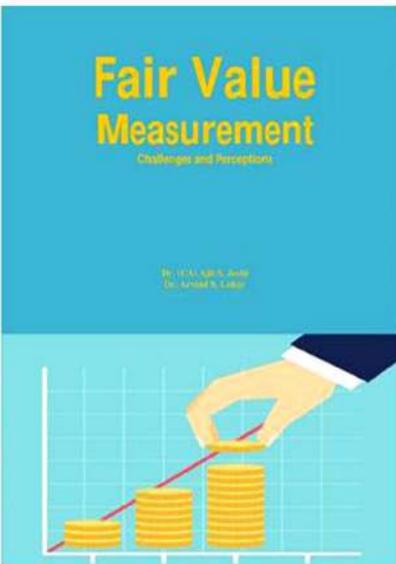
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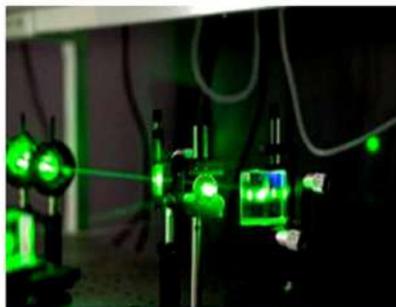


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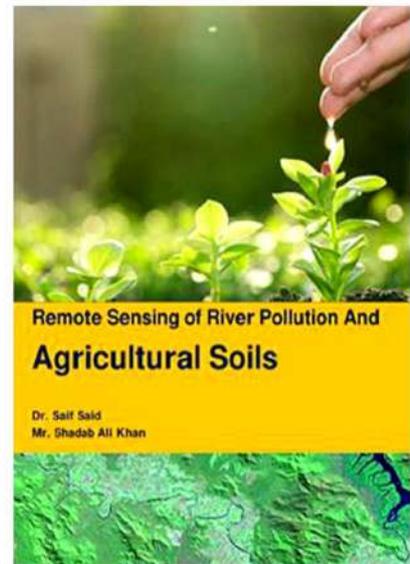
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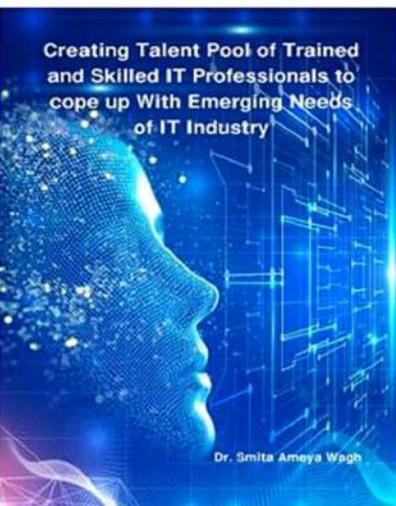
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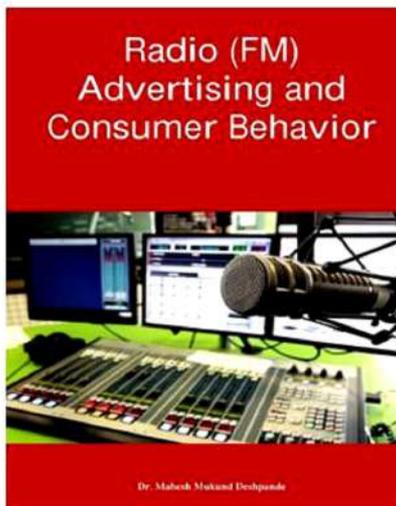
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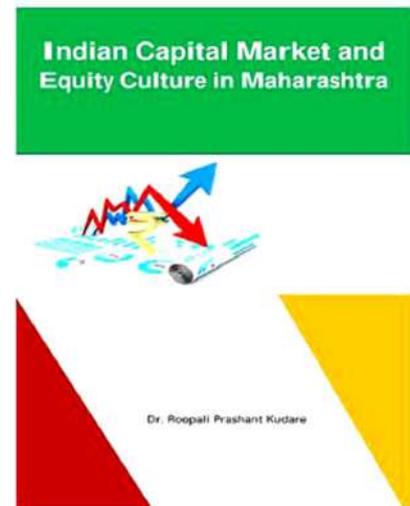
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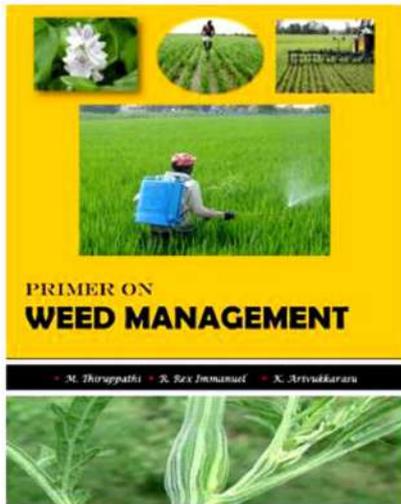
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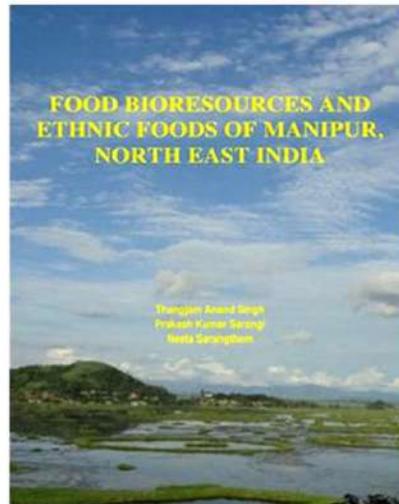
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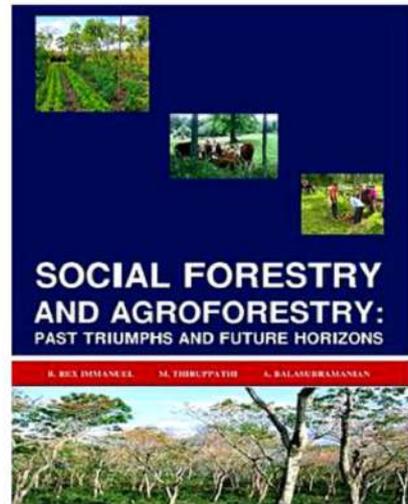
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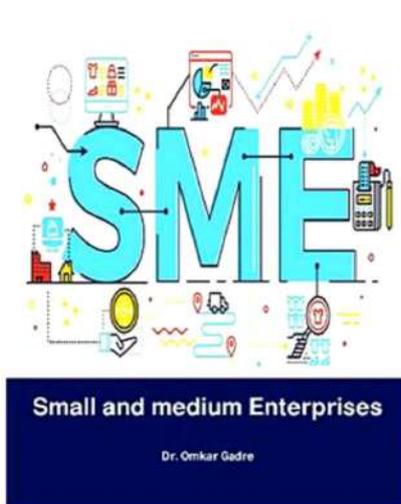
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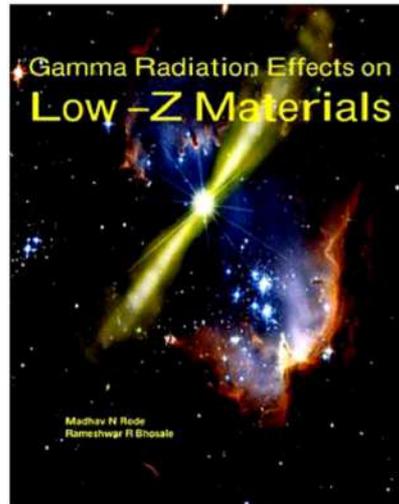
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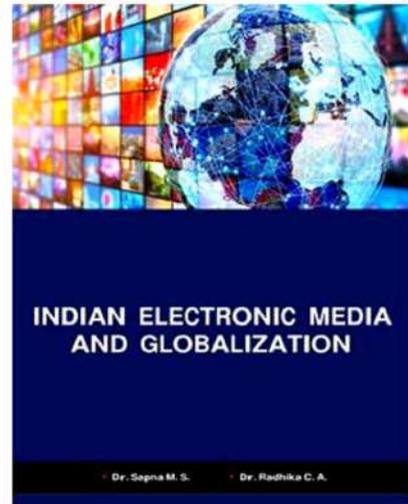
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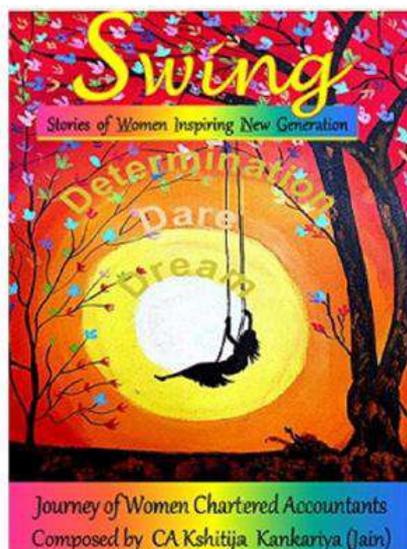
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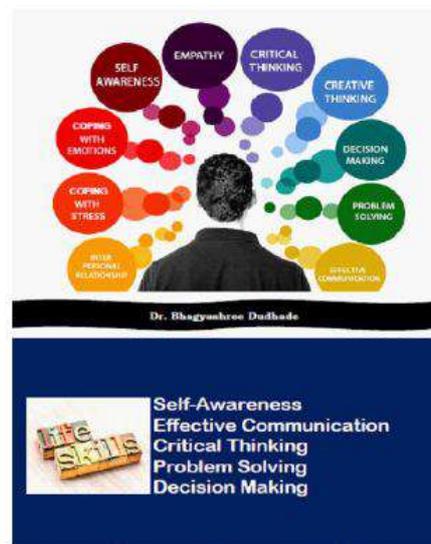
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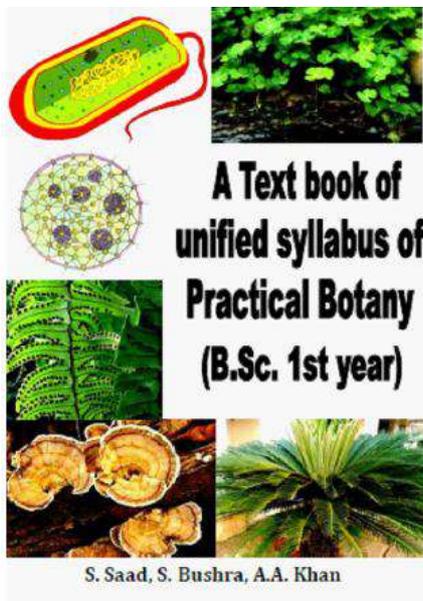
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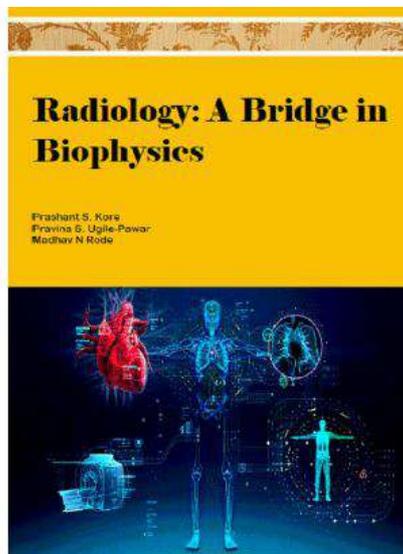


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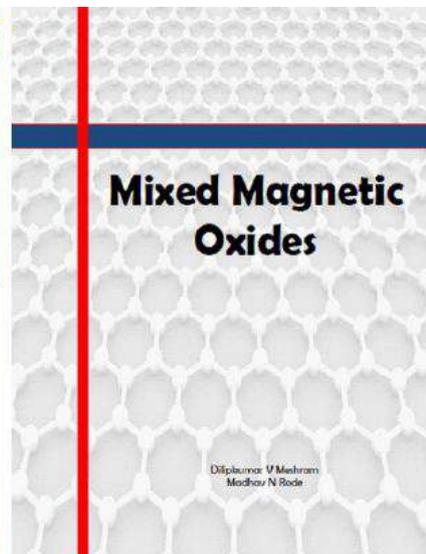
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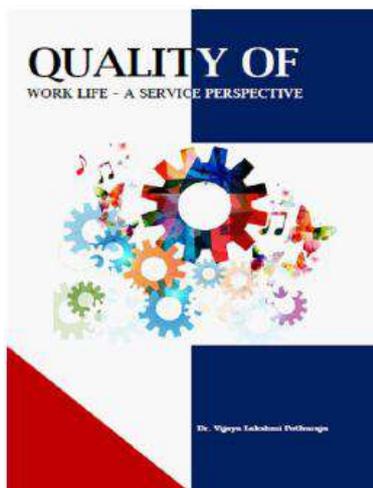
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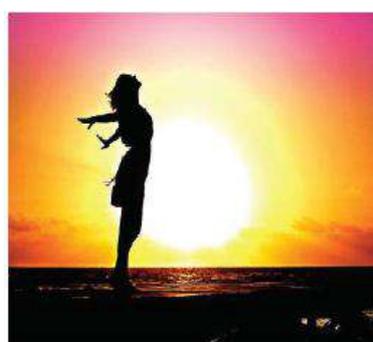
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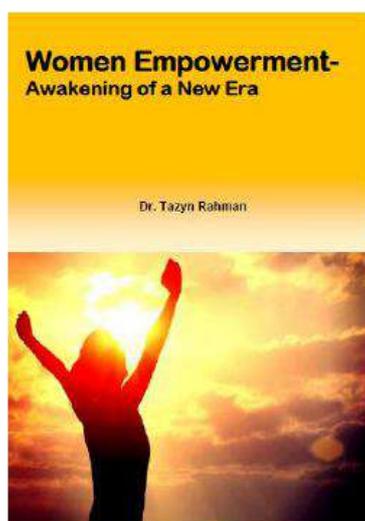
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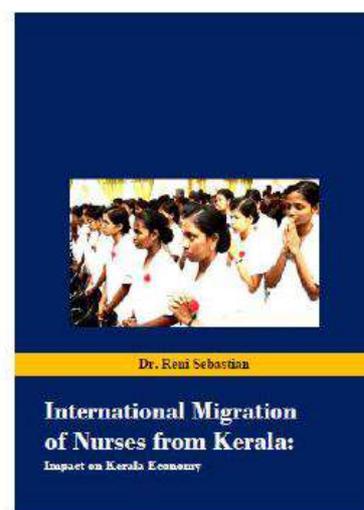
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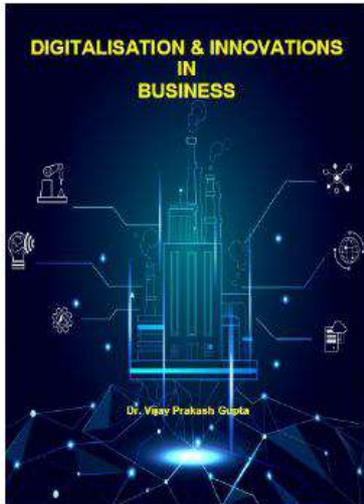
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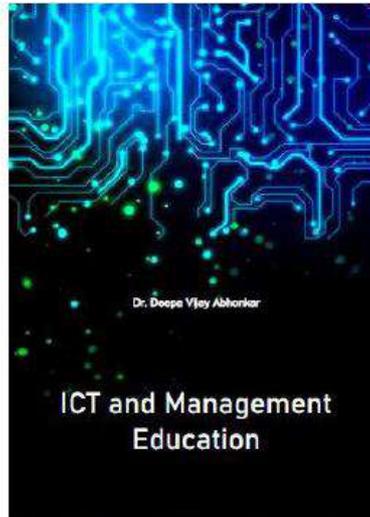
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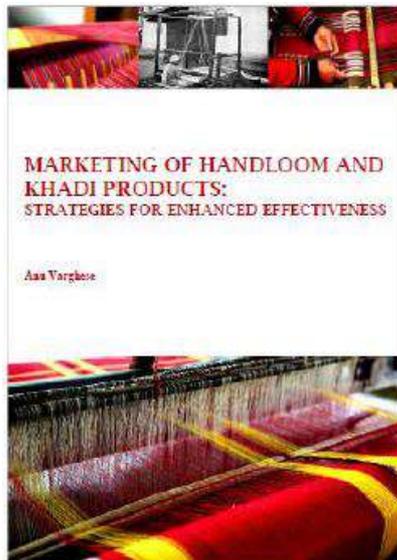
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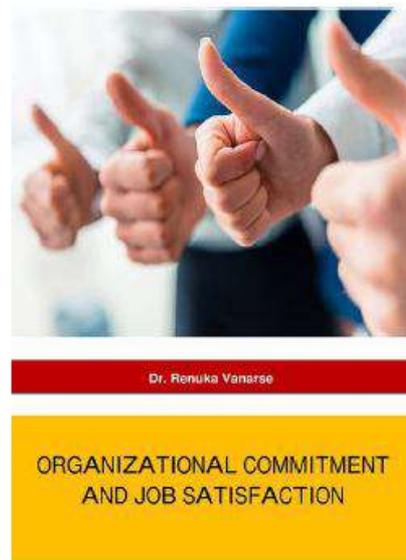
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