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SHARDA UNIVERSITY
Beyond Boundaries

IJMIR
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IJMIR
International Journal of Management Issues and Research

Aim and Scope

AIM

International Journal of Management Issues and Research (IJMIR) is a refereed journal published by the School of Business Studies, Sharda University. It is an academic and a peer reviewed International Journal.

The Journal aims to:

- Disseminate original, theoretical, or applied research in the field of management and its allied areas.
- Publish original, industry-relevant research to reduce the academia-industry gap.
- Seek original, unpublished research based on theory, empirical analysis as well as experimental works for publication.
- Publish strong research in the field of Commerce & Finance, Sales and Marketing, HR and OB, Business Communication, Operations and SCM , IT & Business Analytics as part of Management as a field of Study and also in Healthcare management, as well as other interdisciplinary fields of management.

SCOPE

The scope of International Journal of Management Issues and Research (IJMIR) includes all domains that are listed above and wishes to include emerging themes and actionoriented research. The journal also welcomes focused discussions, cases , monographs and interview papers, and book reviews.

IJMIR
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Message from Dean (Editor In Chief)

Dear Readers,

It is with great pleasure that I present to you the latest issue of the IJMIR International Journal of Management Issues and Research, Volume 12, Issue No. 2. As we continue our journey of academic excellence at Sharda University, I am proud to share that our School of Business Studies remains steadfast in its pursuit of innovation and impactful research.

This issue brings together a diverse array of research papers that reflect the evolving landscape of management studies, addressing emerging challenges and proposing new insights. Our contributors have worked tirelessly to deliver high-quality work, and I trust this compilation will inspire and engage you.

As we close out 2023, I extend my best wishes to all our readers. May the coming months bring you success, growth, and new learning opportunities. We remain committed to providing valuable academic contributions and look forward to your continued support.

Thank you for being a part of our academic community.

Prof. (Dr.) Kapil Pandla
Dean, Sharda School of Business Studies
Sharda University,
Greater Noida (U.P.)

Message from Editor Desk

Dear Readers,

I present to you the latest edition of the International Journal of Management and Innovation Research (IJMIR), Volume 12, Issue 2, for the period of July to December 2023. This edition, proudly curated by the Sharda School of Business Studies at Sharda University, reflects the unwavering commitment of our editorial team, contributors, and reviewers who have collaboratively strived to uphold the journal's standards of excellence.

We have also moved IJMIR to online platform where all the previous Volumes will be made available in the archives of the Journal Platform hosted by Journal Press of India (JPI).

In this issue, we are pleased to feature a broad spectrum of articles that delve into critical areas of management, including human resource development, strategic marketing, entrepreneurial ventures, and supply chain management.

As we release this edition, we also extend our gratitude to our readers, whose engagement and feedback inspire us to continually enhance the quality and relevance of our publication. We look forward to your continued involvement as we collectively pursue the advancement of management research.

Thank you for your ongoing support and for being an integral part of the IJMIR community.
Regards,

Dr. Manmohan Rahul
Prof. and Managing Editor
Sharda School of Business Studies
Sharda University, Greater Noida , UP

Message From Associate Editor

Dear Readers,
As the Associate Editor of the International Journal of Management and Innovation Research (IJMIR), We are honored to present Volume 12, Issue 2, which spans July to December 2023. This issue marks another milestone in our ongoing mission to advance the frontiers of management research, and We are proud to share the fruits of our collective efforts.

IJMIR has consistently served as a vital platform for scholars and practitioners to explore and disseminate cutting-edge research in the management field. The current issue continues this tradition by offering diverse peer-reviewed articles that reflect the depth and breadth of contemporary management challenges. The featured works encompass a variety of topics, including human resource management, innovative marketing practices, entrepreneurial dynamics, and the complexities of global supply chains.

This edition's publication would not have been possible without the collaborative efforts of our dedicated editorial team, the insightful contributions of our authors, and the meticulous evaluations provided by our reviewers. Each article published here has undergone a rigorous review process to ensure that it meets the high academic integrity and relevance standards our readers expect.

We want to extend our heartfelt thanks to all our contributors for their unwavering commitment to quality research and scholarship. Your hard work and expertise have been essential in shaping the content of this issue, and your contributions will undoubtedly influence the ongoing discourse in management studies.

We are equally grateful to our readers, whose continued support and engagement are vital to the success of IJMIR. We value your feedback and encourage you to share your thoughts on this issue, as your input helps us continually improve our journal's quality and impact.

As we move forward, We are excited about IJMIR's future and its role in driving innovation and excellence in management research. I look forward to your continued participation in this intellectual journey.

Sincerely,
Prof. Anup Kumar Srivastava
Dr. Mahima Shukla
Associate Editors
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A STUDY ON THE PERCEPTIONS OF GLASS CEILING AND WORKPLACE BURNOUT

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Abstract

This study examined the relationship between women's perceptions of the glass ceiling and workplace burnout. The concept of glass ceiling beliefs encompasses psychological barriers perceived by women that hinder their career advancement. This study explores how these perception influence burnout, focusing on the psychological composite of female employees. A sample size of 465 female employees participated, providing data through survey measuring glass ceiling and burnout level. The study identifies four specific glass ceiling beliefs: denial, resistance, resignation, and acceptance. Structural Equation Modeling (SEM) was employed to test the hypothesis, revealing that denial and resilience are negatively related to burnout, whereas resignation and acceptance are positively related to burnout. The findings highlight the significant role of glass ceiling beliefs in predicting burnout, emphasizing the need for organizations to address these

perceptions to enhance female employees' well-being and career progression. Practical implications suggest incorporating these beliefs into human resource practices to create a supportive work environment and reduce burnout.

Keywords: *Burnout, Women employees, Glass Ceiling (GC), Workplace barriers.*

INTRODUCTION

The concept of glass ceiling beliefs refers to the psychological perspective on women's perceptions regarding the existence of barriers to their advancement in the workplace. In this study, we have examined the connection between views about the glass ceiling and subjective career features, such as work engagement and burnout, as they are influenced by the psychological composition of female employees (Tanure et al., 2014). Recent initiatives aimed at enhancing organizational performance have started to focus on promoting positive organizational behavior and positive emotions, such as work engagement, while also addressing negative behaviors like burnout. The goal is to improve positive psychology and minimize negative behavior of the employees in the organization. This study examines the correlation between women's perception of the glass ceiling and burnout, which is a significant factor to consider in regard to women's careers in this particular context.

LITERATURE REVIEW

These efforts have been supported by various studies conducted by Rahim and Cosby (2016), Bakker et al. (2014), Seligman and Csikszentmihalyi (2014), Yalabik et al. (2013), Hakanen and Schaufeli (2012), and Halbesleben (2010). Work engagement is a good measure that is defined by qualities such as energy, commitment, and deep involvement (Bakker and Leiter, 2010). On the other hand, burnout is a negative concept that leads to unfavorable results (Bakker et al., 2014; Schaufeli and Salanova, 2013; Maslach et al., 2001). Given the rise in women's involvement in the global labor market (Moghadam, 2015), it is imperative to examine the advancement of women's careers, as it reveals a discrepancy between the availability of qualified women and the demand for higher-level positions (Vanderbroeck, 2010; Eagly and Carli, 2007). The purported imperceptible obstacle is symbolically referred to as the glass ceiling. This study examines four glass ceiling beliefs: denial, resistance, resignation, and

acceptance. Burnout holds a significant role in the field of organizational studies due to its correlation with higher employee turnover rates and decreased levels of work engagement and performance (Rahim and Cosby, 2016; Scanlan and Still, 2013; Halbesleben, 2010).

Burnout

Burnout is a condition characterized by a combination of weariness, cynicism, and decreased effectiveness in one's professional role (Maslach et al., 1997). Exhaustion refers to a continuous condition of physical, cognitive, and emotional depletion, accompanied by low energy and weariness. This condition arises from high job demands and difficulties in both work and home life (Wright & Cropanzano, 1998). The second dimension, cynicism, pertains to an apathetic disposition towards work and one's colleagues, resulting in a gradual loss of interest in one's job. Ultimately, loss of professional efficacy pertains to diminished perceptions of proficiency and accomplishment, both inside one's occupation and the organization in which one is employed (Maslach et al., 1997). Work engagement and burnout have been extensively studied in the field of occupational health psychology (Bakker et al., 2014; Bakker et al., 2011). Research has shown that work engagement is a strong predictor of positive results for both individuals and organizations (Schaufeli, 2015; Bakker and Demerouti, 2008). On the other hand, burnout has been found to have detrimental consequences for employees and organizations (Rahim and Cosby, 2016; Hakanen and Schaufeli, 2012; Hakanen et al., 2006).

Hypothesis

On the basis of our survey of literature, we have formulated the following hypotheses:

H1. Denial is Negatively Related to Burnout.

Disregarding the existence of the glass ceiling within the business contributes to the increased confidence of women, as stated by Wrigley (2002). These instances involve certain shared traits that contribute to the advancement of both men and women in their careers (Fagenson, 1990). According to Carver and Scheier (2002), women have an optimistic outlook and anticipate positive outcomes for themselves. As a result of this optimism, they tend to exhibit high levels of work engagement inside the business

(Xanthopoulou et al., 2009). According to Barkhuizen et al. (2014), there is a negative correlation to burnout.

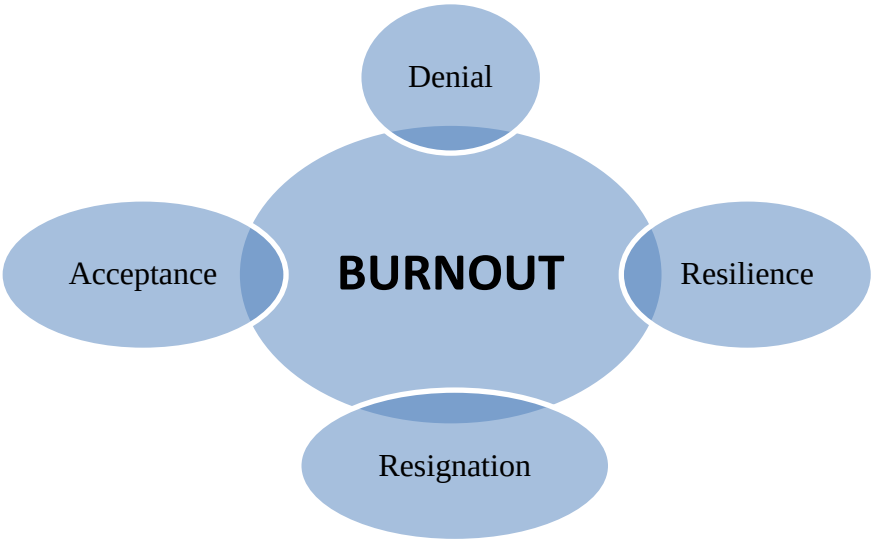


Figure 1: Conceptual model

H2. Resilience is Negatively Related to Burnout.

Wilson and Ferch (2005) assert that personal autonomy and optimism are crucial factors in fostering resilience in the workplace. The studies conducted by Smith, Caputi, and Crittenden in 2012 and Bakker and Leiter in 2010 have shown a correlation between certain factors and reduced levels of burnout. Additionally, Taku's research in 2014 has also found a similar association. Based on this reasoning, we have developed the hypotheses H2 mentioned above.

H3. Resignation is positively related to burnout.

Recent studies indicate that men have a higher likelihood of advancing in their careers compared to women, even when women hold the same level of education and skills (LaPierre and Zimmerman, 2012; Eagly and Carli, 2007). Regarding the belief in resignation, women perceive few prospects for improvements in work conditions. Under such circumstances, individuals may either persist in their dissatisfaction and unhappiness while employed by an organization or opt to resign and pursue self-employment (Walker and Webster, 2007). Given the circumstances, both employee

turnover and job dissatisfaction have a positive correlation with burnout (Timms et al., 2015; Rayton and Yalabik, 2014; Scanlan and Still, 2013). Based on the literature studied, we have developed the hypotheses H3 mentioned above.

H4. Acceptance is positively related to burnout.

A major setback in the participation of women in the labor market is family responsibilities (Appelbaum et al., 2011; Yang, 2011). The glass ceiling belief "acceptance" makes women prefer family goals over career goals. Acceptance can be considered as a psychological application of Hakim's (2003) preference theory, which explains women's choices in regards to career and family and also predicts an increasing trend in women taking up work through different routes, such as flexi-time jobs, part-time jobs, and work-from-home. Either way, with or without these alternate working arrangements, women generally have more difficulty in working out a balance between work and family responsibilities and experience more work family conflict (Yavas et al., 2008). Work family conflict positively relates to burnout (Halbesleben, 2010; Rupert et al., 2009). Some previous studies show a positive relationship between burnout and acceptance (Smith, Caputi and Crittenden, 2012). On the basis of these ideas, we have formulated the above hypotheses H4.

Methods Participants and procedure

The sample comprised 467 people. The personnel were directly provided with the necessary number of surveys and a cover letter guaranteeing confidentiality. Participation in this study was entirely voluntary and limited exclusively to female employees. Out of the 250 survey questionnaire sets that were given, 240 were returned, resulting in a response rate of 93.3 percent. After excluding questionnaires with missing or insufficient data, a total of 467 questionnaires (response rate: 89.8 percent) were used for further data analysis. The average age of the participants was 36.40, with a standard deviation of 8.7.

Measures Glass ceiling beliefs

The measurement of glass ceiling beliefs was conducted using the CPS (Smith, Crittenden, & Caputi, 2012). The CPS evaluates individuals' levels of denial (consisting of ten things), resistance (consisting of eleven items), resignation

(consisting of ten items), and acceptance (consisting of seven items) about the glass ceiling. A Likert scale consisting of seven points was employed, ranging from 1 (indicating strong disagreement) to 7 (indicating strong agreement). The items were evaluated using a rating system that ranged from 1 (indicating significant disagreement) to 7 (indicating strong agreement). The evaluation of burnout was conducted using a revised edition of MBI-GS (Schaufeli et al., 1996).

DATA ANALYSIS

The study model was tested using the Structural Equation Modeling (SEM) methodologies included in AMOS 21.0 (Arbuckle, 2012). The quality of the model was assessed by performing Confirmatory Factor Analysis using maximum likelihood estimation. The adequacy of the models was assessed using the following criteria: relative $\chi 2$:($\chi 2$/df)o3, root mean square error of approximation (RMSEA) of $\leqslant 0.08$, standardized root mean square residual (SRMR) of $\leqslant 0.06$, normed fit index (NFI) of $\geqslant 0.90$, comparative fit index (CFI) of $\geqslant 0.90$, and Tucker-Lewis index (TLI) of $\geqslant 0.90$ (Byrne, 2013; Hooper et al., 2008; Hu and Bentler, 1998). Cronbach's alpha, average variance extracted (AVE), composite reliability (CR), and average loadings (AL) were employed to assess the reliability and validity of the measures.

RESULTS

Descriptive statistics

Table I shows the descriptive statistics of the study variables, which include the means, standard deviations, internal consistency, and correlations. The correlations between the variables were aligned with the anticipated direction.

Table no. 1: Mean and standard deviation

Variable	Mean	SD	1	2	3
1. Denial	4.23	0.85			
2. Resilience	4.96	0.90	0.31		
3. Resignation	2.67	0.90	-0.16	-0.37	
4. Acceptance	2.17	0.72	-0.29	-0.39	0.45

Notes: n=467. *p < 0.05, ***p<0.001

Measurement Models

In order to determine if the different elements in our model were separate from each other and to assess the impact of any shared technique bias, we performed Harman's one-factor test (Podsakoff et al., 2003). However, the results of the test did not show a single factor. The six component model has a Comparative Fit Index (CFI) of 0.94, a Tucker-Lewis Index (TLI) of 0.94, a Root Mean Square Error of Approximation (RMSEA) of 0.05, and a Standardized Root Mean Square Residual (SRMR) of 0.04. The results indicate a strong alignment with the data, as evidenced by a $\chi 2$ value of 1,993.26 with 1,021 degrees of freedom (n=467). The $\chi 2$/df ratio is 1.95, which is below the significance level of 0.01. Furthermore, the constructs have a separate character, and there is no significant impact of bias on the outcomes (Doty and Glick, 1998). Therefore, we have chosen this ultimate measurement model for subsequent studies.

Reliability and validity measurement

Table II presents the specific information regarding the reliability and convergent validity. All the variables exhibited good internal consistency, with values exceeding 0.70 (Nunnally et al., 1967). The measurement model meets the requirements for reliability and convergent validity, as it fulfills the criteria of CRW0.60 and AVEW0.50 (Bagozzi and Yi, 1988; Fornell and Larcker, 1981). Table I provides supporting data for the model's ability to distinguish across different constructs. Upon examining the correlation matrix, it is evident that there are no pairings of variables that exhibit a correlation over 0.70 (Anderson and Gerbing, 1988). Furthermore, it is evident that all of these values are smaller than the square roots of the AVE for the relevant factors, as demonstrated in Tables I and II (Fornell and Larcker, 1981).

Results of Model testing

Figure 1 visually displays the findings of the analysis. The findings of the structural equation modeling (SEM) indicate that all of the hypotheses were accepted with a minimal confidence level of 0.05. This provides support for all of our assumptions, ranging from H1 to H4.

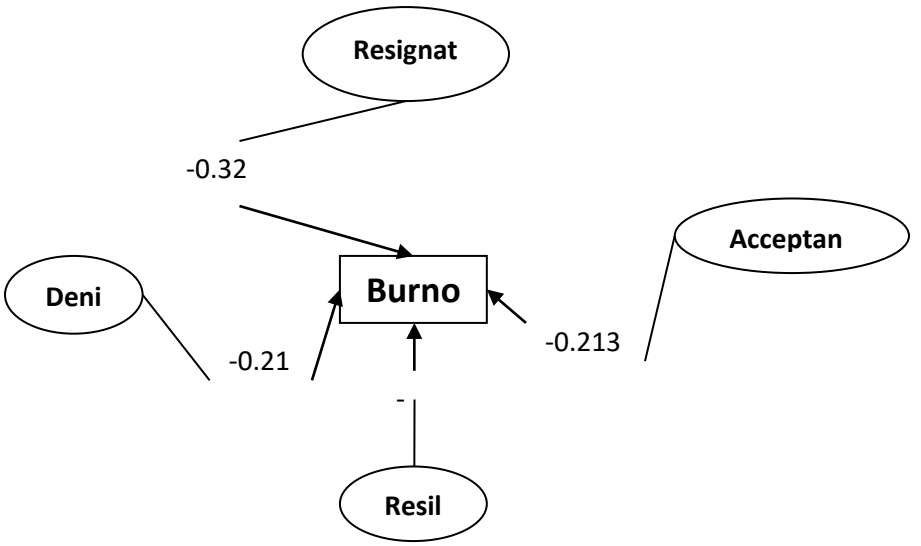
DISCUSSION

Theoretical implications this study focused on women's beliefs about glass ceiling as predictors of important career outcomes – work engagement and burnout. Our main hypotheses were largely supported by the data. We have thus extended previous research results in the fields of work engagement and burnout as the consequences of the glass ceiling beliefs. The relationships between the three components of the burnout are also a major contribution of this work. With regard to women's glass ceiling beliefs, this study is the first to investigate their relationship with burnout.

Table No. 2: Reliability and convergent validity

Variable	Cronbach's ∝	CR	AVE	AL	√AVE
1. Denial	0.88	0.90	0.51	0.72	0.72
2. Resilience	0.90	0.90	0.50	0.79	0.71
3. Resignation	0.85	0.95	0.66	0.81	0.80
4. Acceptance	0.89	0.89	0.73	0.85	0.82

Notes: CR, composite reliability; AVE, average variance extracted; AL, average loading



Notes: n=467. *p < 0.05, ***p<0.001

Figure 2: Research model

Sources et al. (2007) linked women's burnout to socioeconomic, job, lifestyle, and health issues, however they did not consider psychological elements such as women's beliefs and attitudes on their belief in the glass ceiling. This study examines women's perceptions and convictions on the glass ceiling and their correlation with burnout. This study demonstrates that all ideas related to the glass ceiling are predictive of burnout, making a significant contribution to the existing paradigm.

PRACTICAL IMPLICATIONS

Beliefs regarding the glass ceiling exhibit substantial correlations with burnout. This study demonstrates the significance of examining such ideas for the purposes of human resource activities in businesses. The CPS might be regarded as a prerequisite for recruitment, training, succession planning, promotion, and counseling. This study would have organizational ramifications by assisting in talent retention and creating a supportive work structure and atmosphere for female employees. Consequently, this would result in enhanced productivity among staff members and subsequently elevate the overall effectiveness of the firm. This survey on glass ceiling beliefs can inform the development and implementation of policies tailored to the personality and behavioral attributes of female employees. These policies aim to enhance job effectiveness and overall well-being in the workplace. Engaging in such activities will facilitate the empowerment of women in the industrial sector.

LIMITATIONS AND FUTURE RESEARCH DIRECTIONS

Further investigation into these potential consequences will require longitudinal investigations. Despite the potential influence of method bias on the study's findings, we have confidence in our results. This is because all the scales used in the study were multi-item scales with high reliability. Such a consistent pattern of results helps alleviate concerns about common method bias (Spector, 1987). Furthermore, it is important to note that our findings could be affected by the uniformity of the sample, as the study specifically focused on female employees within a single professional area. Conducting future research on individuals across various professional sectors will assist in making these findings more applicable to a wider population. Conducting similar studies in sectors such as defense and security forces, which are predominantly male, would offer more valuable insights into the phenomenon of glass ceiling beliefs.

In conclusion, the findings of our study indicate that holding glass ceiling views is a strong predictor of experiencing burnout. It is important to acknowledge that our research only examined a limited number of career-related factors. Examining the effects of various career factors can lead to a more thorough comprehension, ultimately enhancing employee well-being through interventions in organizational management.

CONCLUSION

The findings of this study indicate that the perception of a glass ceiling is a significant predictor of experiencing burnout. The optimistic ideas on the glass ceiling, which include denial and tenacity, and the pessimistic beliefs, which encompass resignation and acceptance, make conflicting or contradictory assertions. Therefore, it is important to encourage positive ideas about the glass ceiling and to manage negative beliefs through the provision of suitable training or counseling to prevent burnout. This study aims to overcome the obstacle of the glass ceiling by acknowledging the perceptions held by female employees on the glass ceiling. Consequently, it seeks to facilitate the progress of women in their careers, empowering them both financially and socially.

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PORTFOLIO CREATION USING MARKOWITZ MODEL ON TOP-FIVE IT COMPANIES IN INDIA

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Abstract:
This research paper aims to understand how the Portfolio's creation using the Markowitz Model will help choose the best Portfolio among the number of available portfolios if an investor is investing in two companies. This paper will help all investors who want to invest in companies that make maximum profit for an equal amount of Risk instead of investing in random companies. The data included in this research is from secondary data collected from financeyahoo.com as a source of data for analyzing best portfolios, which will be helpful for an investor to invest in these companies, specifically IT sectors. The findings of this research paper are to make an investment in the best Portfolios than making investments from random two companies. In this, there are ten portfolios' out of which there are five Portfolios those are the best portfolios for an investor to make investments in such companies, remaining there are only in the proportion of 70: 30, 80: 20, 90: 10 and 100: 0 which

are not suitable to invest as per my opinion. This research paper is only limited to those investors who want to invest in two companies. Future researchers can concentrate on making portfolios of more than three companies and try to link with other more profitable sectors and create an investor easy to make the investment that brings maximum returns and minimizes the Risk.

Keywords*: Markowitz model, Investment Portfolios, Covid-19, Portfolio Evaluation and Portfolio Selection, IT Sectors*

INTRODUCTION:

"As a consequence of Covid-19 and later, IT has become the most visible internal function, with business and other functions expecting IT services and support like never before. In the post-COVID-19 era, IT will truly become the backbone of the business." IT sectors are growing day by day during and post pandemics, and their contribution to the GDP is also improving day by day. So, investors may think they have to invest in which sector and which sector's performance is better during the pandemic. So, the answer to all these questions is here; According to Gartner, as information provided by **(Business Standard 2021)**, IT spending in India is expected to increase up to US$ 93 billion in 2021 (7.3 per cent year on year growth) and US$ 98.5 billion in 2022.. Investments can be made in various assets, including real estate and financial support.

Investment in financial assets is much more liquid or yields a faster return. Because the value of financial assets fluctuates significantly, liquidity exists. The value of assets can change quickly, encouraging investors to invest. So, while selecting the best portfolios, the investors can choose the portfolios based on the Markowitz Model. They are analyzing various potential portfolios of the given securities aids in choosing the most efficient Portfolio. Since investors behave rationally to minimize Risk and maximize Portfolio, the Markowitz Model is best for selecting an optimal portfolio. The benefit for the investors of using this model is that an investor can construct a portfolio of multiple assets that will yield higher returns while reducing the Risk where investors will look for diversified portfolios. So in this, I'm choosing the Top 5 companies in the IT sector to see the different combinations of portfolios, which

would help the investors to make the best choice and make a better decision in choosing the best Portfolio.

All over the world as of today, India is the leader in Information Technology; it's not just for one or two stocks, but many top-class companies in the category. This sector has not just contributed to India's growth journey but also became multi-bagger stocks (Multibaggers are stocks that provide returns that are multiples of their costs), and not only that, it has also offered high-quality jobs in India and the standard of living of middle-class people has raised in India. In future also, IT sectors will continue to grow and create enormous opportunities in India.

After analyzing the company's Profitability, Economic growth, Financial Position the company, and Recent trends or the technologies adopted by these IT companies, investors' investment decisions will be based on the best available Portfolio. Because a rational investor doesn't just look into these things, his investment decision finally depends on the best Portfolio. So, the Markowitz Model plays an essential role in decision making because an investor wants more returns and low Risk or with a more amount of Risk; more returns after considering all the above factors. So, in this Top 5 Companies, investors will search for opportunities available under this Portfolio and chooses the best Portfolio for their decision making where his complete process for investing will end here where a rational investor will not make his decision based on Individual Company as Putting all the eggs in one basket and incurring loss is not a decision of the sensible investor.

OBJECTIVES OF THE STUDY:

1. To estimate and analyze the portfolio return of various portfolios designed for the combination of companies from IT sectors and their relationship to other stocks in the Portfolio.
2. To investigate the optimization of Investment portfolios by using Markowitz Model.

REVIEW OF LITERATURE:

The literature review is all about findings from different authors about the Portfolio of other sectors, same sectors or Top 10 companies from all the sectors, which results in the relationship between Risk and Return.

(Fadadu, Mathukiya, & Parmar, 2015). (Danko & Soltes, 2018) The study stipulates that the share market in India supports the efficient market theory, though the market responds quickly. To construct an efficient Portfolio, it's required to minimize the risk level. With the help of beta, we can easily calculate the systematic Risk. Total portfolio risk is reduced by mitigating systematic Risk with asset allocation and unsystematic Risk with diversification. With the help of both risk management solutions such as asset allocation, diversification and Valuation timing.**(Danko, Soltes, & Bindzár, New Approach to Portfolio Creation Using the Minimum Spanning Tree Theory and Its Robust Evaluation, 2020)** has found that their proposed method provides (on average) the best appreciation of the invested resources while also being the least risky investment in terms of relative variability, which is very appealing from the perspective of an individual investor where **(Abdul Hali & Yuliati, 2020) and (Shadabfar & Cheng, 2020).** The portfolio optimization discussed takes tolerance for Risk into account. An equation form has been obtained to get the weight of the fund allocation for each asset in the investment portfolio **(Aqilah Mohammed Fauzi et al., 2019)** which helps in the decision making of an investor with the help of the TOPOSIS model for analyzing Top 5 companies and Markowitz model for identifying best Portfolio. Markowitz portfolio optimization model, the researchers have found that the estimated Risk is closer to the realized Risk when the filtering procedures are used in general. But in another bootstrap analysis, the ratio between the recognized Risk and the expected Return is improved. Overall, the research has shown that different filtering procedures give different portfolio optimization results. All of it depends on the various risk level of the Portfolio, the period size of the investment, the reliability of the Risk, and the return estimation **(London, Gera, Banhelya 2018)**. There were two findings in this research as stated by **(Širůček & Křen, 2015):** The relationship was not as prominent between the expected rate of return and the beta coefficient and was not clear as Sharpe and Lintner expected. The high beta coefficient does not guarantee higher returns, as even

other indicators should be taken into account like capitalization of the market or the ratio of book value to the market value of stocks(B/M) as indicated by the Fama and French(2004) or P/E ratio Indicated by Sirucek, Soba and Nemecek(2014). Overall, the beta coefficient was not sufficient To identify or explain the expected returns. The Markowitz model is best for portfolio selection. It will reduce the Risk for Indian Investors, increase the returns for the selected Portfolio, and provide alternatives for investors in choosing the Portfolio **(Joshi, 2020) and (Muslim, 2020).** Used properly, a manager can increase portfolio returns and reduce Risk to optimize an investment portfolio **(Fadadu, Mathukiya, & Parmar, 2015). (Danko & Soltes, 2018), (Šoltés & Danko, 2017)** there is no dependence between minimized standard deviation from the perspective of the prize history of the portfolio and Simulations stocks on the periphery of the estimated minimum spanning trees have a higher diversification potential than others. A portfolio with more significant diversification potential has a lower average value of the minimized standard deviation created by simulation of a specific sample (small vs large eccentricity).

According to **(Prastiwi, Kartowagiran, Susantini 2020),** in this study, there were four stages of developing the electronic Portfolio. As per the study, there were several advantages to using an electronic Portfolio as an assessment. It is found that an electronic Portfolio facilitates lifelong learning as it has helped capture, manage, and examine the students' learning experience. The lecturers and students can also communicate better by communicating the actual concepts or information. Students can also use audio and videos and make the portfolios more interesting. The study has computed the critical diffusion coefficient in the case of multidimensional discrete law and Gaussian law, and the researchers have provided a solution to the problem in the multidimensional case. The researchers have explained a way for measuring the working and performance of investment strategies, the Sharpe ratio of terminal wealth and used this to assess the value of investments **(de Franco, Pham, Nicolle 2019).**

RESEARCH METHODOLOGY:

This includes qualitative and quantitative research as I'm using the Markowitz model to optimize portfolios, and it is purely secondary data and empirical in nature. To analyze the Return and the Risk of portfolios, I have considered sample units of 2019,

2020 and 9 months of 2021 data of Top 5 IT Companies of TCS, Infosys, HCL Technologies, Wipro and Tech Mahindra from **financeyahoo.com** as it is a timespan data and I will be exploring the Correlation of these portfolios to see how the investor invests in these companies that signifies the degree of relationship between the price movements of the various Portfolio's assets.

DATA ANALYSIS:

In this study, the data analysis will begin by introducing the Top 5 IT companies in India. This has been chosen by analyzing the Profitability and Valuation of the company. So Top 5 companies have been selected from one of the articles which give a detailed brief about the Profitability and Valuation of the company. So, I have chosen the Top 5 IT companies from that article for my study.

So, the Top 5 IT Companies in India are

1. Tata Consultancy Services (TCS)
2. Infosys
3. Hindustan Computer Limited (HCL)
4. Wipro
5. Tech Mahindra

PROFITABILITY RATIO:

It represents the profit portion of total income generated after subtracting the costs of goods sold. In this particular ratio, there are various other kinds of ratios. So, for choosing the best Portfolio, Investors will look into Return on Equity (ROE) and Return on Capital Employed (ROCE). So we will see one by one for each company.

Return on Equity (ROE): Return on equity assesses how often a company earns for every dollar invested. When it comes to ROE, TCS is consistently at the top, with consistently higher ROE. Its most recent ROE is 47.99%, and it is followed by Infosys, which has a most recent ROE of 29.34%. Then there's HCL, with an ROE of 21.80% and Wipro, with an ROE of 19.66%. Finally, Tech Mahindra has an ROE of 17.81% Wipro was consistently lower than HCL until FY 21, but Wipro has surpassed HCL in ROE in the most recent numbers. So, in terms of ROE, TCS is number one, Infosys is number two, HCL is number three, Wipro is number fourth and finally,

Tech Mahindra is last even though Tech Mahindra and Wipro are close with a difference of 2%.

Return on Capital Employed (ROCE): ROCE will measure the profitability and efficiency of the company as it assesses how it is generating its profits by making use of capital that is put into use. When it comes to ROCE, TCS is once again at the top, with a consistently high ROCE of 52.91%. It is followed by Infosys, which has the most recent ROCE of 35.96%. Then there's HCL, which has 30.14%. Wipro has 27.32% and finally, Tech Mahindra has 20.39%. So, in terms of ROCE, TCS is ranked. First, Infosys is ranked second, HCL is ranked third, Wipro is ranked fourth and Tech Mahindra is ranked fifth. However, all five companies are incredibly profitable.

Shareholdings of the company: Shareholders are the one who plays significant roles in the company's direct as well as indirect operation of a company. So now we will look into the shareholders of each IT sector. Shareholdings of TCS promoters own 72.19% of the company; later comes Infosys, where promoters own 12.95% of the company. Then will see the promoter's shareholding in HCL where advocates hold 60.33%, followed by Wipro promoters having 73% of the company, and finally, the proponents of Tech Mahindra hold 35.76% of the company. In terms of Shareholdings, Wipro holds the first position, followed by TCS, then HCL, after HCL Tech Mahindra and finally Infosys. So, except for Infosys, all companies have a high percentage of promoter shareholding.

VALUATION OF THE COMPANY:

The method of evaluating a business's current worth and economic value using objective measures and evaluating all aspects of the company is known as business valuation. Valuation is based on the Price to Earnings Ratio (PE Ratio).

Price To Earnings Ratio (PE Ratio): PE ratio is a valuation method. It refers to comparing a company's current share price to its earnings per share (EPS) of a company. TCS is currently trading at Rs 3546.70 at a PE ratio of 33.87, Infosys at Rs 1567.55 at a PE of 29.82, HCL at Rs 1079.25 at a PE of 21.70, Wipro at Rs 508.80 at

a PE of 23.02, and Tech Mahindra at Rs 1259.00 at a PE of 23.80. From the perspective of Valuation, we can rank TCS first. It is followed by Infosys in second place, Tech Mahindra in third place, Wipro in fourth place, and HCL Technologies in fifth place. Overall, we can conclude that all five companies are excellent in the business, have the necessary skill set, and have a future growth plan. Nowadays investors will be willing to pay higher share prices because more expectations of growth in future may lead to more returns.

Following is the table which shows overall important ratios of the Top IT companies in the form of a table to make it easy for the people who want to invest in these companies:

Table 1: Company Financial

COMPANY NAME	ROE	ROCE	PE RATIO	SHARE HOLDINGS	PRICE OF SHARES
TCS	42.99%	52.91%	33.87	72.19%	3546.70
INFOSYS	29.34%	35.96%	29.82	12.95%	1567.55
HCL	21.80%	30.14%	21.70	60.33%	1079.25
WIPRO	19.66%	27.32%	23.02	73%	508.80
TECH MAHINDRA	17.81%	20.39%	23.80	35.76%	1259.00

MARKOWITZ MODEL:

In 1952, Dr Harry M Markowitz proposed this model. It aids in selecting the most efficient by analyzing different possible portfolios of the given securities. The HM model demonstrates how to reduce Risk by selecting securities that do not 'exactly together. The HM model is also known as the Mean-Variance Model because it is

based on the various portfolios' expected returns (mean) and standard deviation (variance).

Now I will determine the Expected Return and Risk for a set of efficient portfolios and then will analyze the results and select the best Portfolio from the collection of efficient portfolios that yields maximum Return and minimum Risk or the portfolios with the same level of Risk expected return.

I have analyzed companies, and ten portfolios have been found for IT sectors. The portfolio includes TCS & INFOSYS, TCS & HCL TECHNOLOGIES, TCS & WIPRO, TCS & TECH MAHINDRA, INFOSYS & HCL TECHNOLOGIES, INFOSYS & WIPRO, INFOSYS & TECH MAHINDRA, HCL & WIPRO, HCL & TECH MAHINDRA and WIPRO & TECH MAHINDRA. The ten portfolios are as follows:

1. TCS AND INFOSYS
2. TCS AND HCL TECHNOLOGIES
3. TCS AND WIPRO
4. TCS AND TECH MAHINDRA
5. INFOSYS AND HCL TECHNOLOGIES
6. INFOSYS AND WIPRO
7. INFOSYS AND TECH MAHINDRA
8. HCL TECHNOLOGIES AND WIPRO
9. HCL TECHNOLOGIES AND TECH MAHINDRA
10. WIPRO AND TECH MAHINDRA

Table 2: Returns of all IT companies:

Date	**TCS returns**	**info returns**	**HCL returns**	**Wipro returns**	**tech mah returns**
2019-01-01					
2019-02-01	-1.51	-2.09	4.78	0.189545581	13.53
2019-03-01	0.81	1.14	3.30	-8.198218378	-6.71
2019-04-01	12.72	1.03	8.76	17.13444318	7.54
2019-05-01	-2.58	-1.75	-7.59	-3.971181715	-8.90

2019-06-01	1.38	-0.66	-2.65	-2.146220296	-7.12
2019-07-01	-0.98	8.48	-2.81	-5.367328218	-9.87
2019-08-01	2.39	2.59	6.35	-4.145468156	9.28
2019-09-01	-7.03	-1.14	-1.80	-5.720464972	2.68
2019-10-01	8.15	-14.88	7.67	8.090078714	3.44
2019-11-01	-9.58	1.52	-3.07	-8.294758489	3.07
2019-12-01	5.29	5.14	0.79	3.470761508	0.14
2020-01-01	-3.79	6.09	4.09	-3.720265953	4.30
2020-02-01	-3.77	-5.80	-9.70	-6.630066217	-6.47
2020-03-01	-8.89	-12.45	-18.23	-11.08095854	-24.06
2020-04-01	10.52	1185	24.28	-3.102749651	-3.34
2020-05-01	-2.15	-3.47	1.40	11.57480472	-2.87
2020-06-01	5.61	6.44	1.07	3.363911503	2.46
2020-07-01	9.62	31.30	26.81	27.71962214	25.49
2020-08-01	-1.14	-3.91	-1.72	-3.278692731	8.68
2020-09-01	10.42	8.56	17.06	15.54900992	6.81
2020-10-01	6.96	5.22	3.89	8.625633764	2.78
2020-11-01	0.54	3.77	-2.49	2.891532709	7.67
2020-12-01	7.13	14.11	15.05	10.19971469	11.06
2021-01-01	8.46	-1.29	-3.28	8.233006602	-1.17
2021-02-01	-6.97	1.02	-0.60	-1.87776013	-4.48
2021-03-01	9.72	9.21	8.14	0.9751340524	7.91
2021-04-01	-4.38	-1.01	-8.54	18.87976334	-2.98
2021-05-01	3.97	2.94	5.08	9.443548044	6.25
2021-06-01	5.90	13.46	4.15	1.252551438	7.17
2021-07-01	-5.31	1.83	4.17	7.504801649	10.44
2021-08-01	19.54	5.83	15.21	9.316404063	19.67
2021-09-01	-0.32	-1.69	8.26	-1.076027135	-4.58
2021-10-01	-4.32	2.39	-2.20	11.53937334	3.57

Table 3: Expected return and risk for all it sectors:

Company Name	Expected Return	Risk
TCS	24.15	24.12
INFOSYS	34.12	28.24
HCL TECHNOLOGIES	38.41	32.22
WIPRO	39.03	31.21
TECH MAHINDRA	29.60	32.20

We can observe in the above chart, all the IT Companies except Tech Mahindra have the Expected Return good expected returns and for TCS, the Expected Return and the Risk are the same. The rest of the companies have more expected Returns than Risk, but the decision cannot be made based on these results. But in the case of Tech Mahindra, Risk is more than the Expected Return. So to know best, the Portfolio will analyze the Correlation between two companies for each Portfolio and continue with another process of evaluating the results.

From the above table, we can recognize the correlations for each Portfolio. The Correlation will act as compensation for an investor between increased Risk and potentially higher returns. According to Markowitz, if the coefficient correlation is +1, then it is a perfect positive correlation when it is -1. It is a perfect negative correlation, and one more suggestion given by him is whichever is having -1 then the Return of a portfolio will be minimum and securities which will have a lower than positive Correlation, there will be a low risk without reducing the returns to come down that means there won't be much profit. Still, returns won't reduce it, maybe the same or slightly increase. From the table above, TCS and Infosys, Infosys and Wipro and HCL Technologies and Wipro have a low positive correlation. Rest other portfolios have more than 0.5, which means that portfolios with these securities will be moving up and down. But a rational investor will always check the Optimum Portfolio from the number of available portfolios, resulting in the best portfolios to invest in and have good returns.

Table 4: Correlation for each Portfolio:

SL.NO	Portfolios	Correlation
1	TCS AND INFOSYS	0.44
2	TCS AND HCL TECHNOLOGIES	0.71
3	TCS AND WIPRO	0.51
4	TCS AND TECH MAHINDRA	0.50
5	INFOSYS AND HCL TECHNOLOGIES	0.68
6	INFOSYS AND TECH MAHINDRA	0.56
7	INFOSYS AND WIPRO	0.42
8	HCL TECHNOLOGIES AND WIPRO	0.49
9	HCL TECHNOLOGIES AND TECH MAHINDRA	0.68
10	WIPRO AND TECH MAHINDRA	0.57

OPTIMAL PORTFOLIO:

In this, I will find out the Portfolio Risk and Portfolio Return for each Portfolio and then Sharpe's Ratio. Risk of the portfolio is the possibility that the combination of assets or units in your investments will fail to meet financial objectives. In contrast, Portfolio Return is the gain or loss realized by an investment portfolio of various assets. The Sharpe Ratio defines an excess risk in a portfolio's past performance and expected future performance.

Table 5: Construction of portfolio by changing the percentages of money invested in both the stocks

Construction of 11 portfolios by changing % of the money invested in both the stocks for TCS and INFOSYS					
Portfolio	**Weight-TCS**	**Weight-INFO**	**Portfolio-Risk**	**Portfolio-Return**	**Sharpe Ratio**
1	1	0	24.12	24.15	0.9968516933
2	0.86	0.14	22.77	25.54	1.117418222

3	0.76	0.24	22.18	26.54	1.192279597
4	0.66	0.34	21.92	27.94	1.269772564
5	0.53	0.47	22.12	28.83	1.298740873
6	0.42	0.58	22.75	29.93	1.311349069
7	0.38	0.62	23.07	30.33	1.310223609
8	0.26	0.74	24.33	31.53	1.291841328
9	0.16	0.84	25.66	32.52	1.26356054
10	0.06	0.94	27.22	33.52	1.228005968
11	0	1	28.24	34.12	1.204653824

From the above table, we can find different portfolios, but the most important thing we have to look into is an Optimal Portfolio. In the 6th row, we can see the optimal Portfolio because of the high Sharpe Ratio. So, the best option for an investor is to invest 42% in TCS, and 58% in Infosys and the Sharpe Ratio is 1.311349069. So, Risk is equal to return where Risk is 22.75 and Return is 29.93. And the Correlation also shows a more significant relationship between TCS and Infosys: r = 0.44. As per Markowitz, having less than 50%, there will be a more significant correlation between these portfolios, where an investor will not incur loss and more Risk.

Table 6: Construction of 10 portfolios by changing % of the money invested in both the stocks of TCS and HCL TECHNOLOGIES

Portfolio	Weight-TCS	Weight-HCL TECH	Portfolio-Risk	Portfolio-Return	Sharpe Ratio.
1	1	0	24.12	24.15	0.9968516933
2	0.9	0.1	24.1	25.57	1.056928384
3	0.76	0.24	24.43	27.57	1.124432598
4	0.66	0.34	24.91	29	1.159866706
5	0.56	0.44	25.59	30.42	1.184888936

6	0.46	0.54	26.45	31.85	1.200425799
7	0.36	0.64	27.47	33.28	1.207798206
8	0.3	0.7	28.15	34.13	1.208917233
9	0.16	0.84	29.93	36.13	1.203937062
10	0.06	0.94	31.33	37.56	1.195464103
11	0	1	32.22	38.41	1.188967042

In the above table, we can observe various portfolios. Still, the best option for an investor to invest is 8th row because the Optimal Portfolio is found because of an increase in **Sharpe Ratio 1.208917233.** At this point, this Portfolio provides greater satisfaction to the customer. Now, we will compare this Risk and return with the Correlation for TCS and FCL Technologies, where there is a good return and Risk and has positive Correlation between these two companies, i.e., 71%, which means there will be an equal amount of risk and return. So this is the best Portfolio if the investor wants to invest in one where an investor can always expect positive outcomes from this particular Portfolio.

Table 7: Construction of 10 portfolios by changing % of the money invested in both the stocks

Portfolio	**Weight-TCS**	**Weight-WIPRO**	**Portfolio-Risk**	**Portfolio-Return**	**Sharpe Ratio.**
1	1	0	24.12255289	24.14660769	0.9968516933
2	0.96	0.04	23.81275965	24.7421031	1.034827691
3	0.86	0.14	23.2605597	26.23084162	1.123396941
4	0.76	0.24	23.04260126	27.71958013	1.198631171
5	0.66	0.34	23.16831948	29.20831865	1.25638455
6	0.56	0.44	23.63223016	30.69705717	1.294717298

7	0.46	0.54	24.41506291	32.18579568	1.31418034
8	0.39	0.61	25.13734107	33.22791265	1.317876563
9	0.26	0.74	26.81466847	35.16327272	1.307615373
10	0.16	0.84	28.36096965	36.65201124	1.288813877
11	0.06	0.94	30.09259831	38.14074975	1.264123136
12	0	1	31.20783912	39.03399286	1.24757093

We can observe different portfolios from the above table, but the best option for an investor to gain an optimal portfolio is the 8th row, where Sharpe Ratio is 1.317876563. To be more precise, we will also compare Correlation with Risk and Return. It has 51% of the Correlation and has 25.14 of Return for 33.23 for a portfolio where an investor will gain more Return, and less Risk or the investor will have an equal amount of risk and return.

Table 8: Construction of 12 portfolios by changing % of the money invested in both the stocks

Portfolio	Weight-TCS	Weight-TECH MAH	Portfolio-Risk	Portfolio-Return	Sharpe Ratio.
1	1	0	24.12255289	24.14660769	0.9968516933
2	0.96	0.04	23.79683645	24.3646935	1.019660472
3	0.86	0.14	22.91163597	24.90990801	1.082851876
4	0.76	0.24	21.91515003	25.45512252	1.156967782
5	0.66	0.34	20.79138375	26.00033703	1.245724543
6	0.56	0.44	19.51836508	26.54555154	1.354906081
7	0.46	0.54	18.06456786	27.09076605	1.494127413
8	0.36	0.64	16.3819336	27.63598056	1.680874873
9	0.26	0.74	14.39041295	28.18119507	1.951382158

10	0.16	0.84	11.93638641	28.72640958	2.398247559
11	0.01	0.99	6.2719125	29.54423134	4.694617685
12	0	1	5.674066041	29.5987528	5.198873714

I found that the 12th row is seen as an optimal portfolio from the above table. But is not advisable for an investor to invest in these portfolios because putting all the eggs in one basket is not good for an investor, depending on various factors. So, the investor can ignore this particular Portfolio and look for other portfolios that best suit an investor to invest.

Table 9: Construction of 12 portfolios by changing % of the money invested in both the stocks

Portfolio	Weight-INFO	Weight-HCL TECH	Portfolio-Risk	Portfolio-Return	Sharpe Ratio.
1	1	0	28.24	34.12	1.204653824
2	0.96	0.04	28	34.29	1.221082487
3	0.86	0.14	27.55	34.72	1.256799783
4	0.76	0.24	27.31	35.15	1.283597674
5	0.66	0.34	27.28	35.58	1.300341804
6	0.55	0.45	27.51	36.05	1.30663567
7	0.46	0.54	27.9	36.44	1.302619331
8	0.36	0.64	28.52	36.87	1.289403982
9	0.26	0.74	29.33	37.3	1.268364073
10	0.16	0.84	30.32	37.73	1.241161545
11	0.06	0.94	31.46	38.16	1.209477812
12	0	1	32.22	38.41	1.188967042

We can see in the above table, 6^{th} row has an optimal portfolio as there is an increase in Sharpe Ratio that is 1.30663567. But to understand more, we will compare Risk and

return with Correlation, whereas there is 27.51 is the Risk and 36.05 is the Portfolio return, and it has a more significant Correlation is 68%. So, from the available options, an investor can choose this Portfolio where there is less Risk and more Return. But is very difficult to find such riskless portfolios, so investors can invest in this particular Portfolio, which will amount to an equal amount of Risk and Return.

Table 10: Construction of 12 portfolios by changing % of the money invested in both the stocks

Portfolio	Weight-INFO	Weight-TECH MAHI	Portfolio-Risk	Portfolio-Return	Sharpe Ratio.
1	1	0	28.23945777	34.11877078	1.204653824
2	0.96	0.04	27.85350688	33.93797006	1.214854927
3	0.86	0.14	27.07534152	33.48596826	1.233076533
4	0.77	0.23	26.61772939	33.07916664	1.238992483
5	0.66	0.34	26.38852444	32.58196466	1.230912503
6	0.56	0.44	26.50241598	32.12996287	1.20856766
7	0.46	0.54	26.91946761	31.67796107	1.173052956
8	0.36	0.64	27.62595288	31.22595927	1.126692694
9	0.26	0.74	28.60043114	30.77395747	1.072499828
10	0.16	0.84	29.81663802	30.32195567	1.013593674
11	0.06	0.94	31.24635975	29.86995387	0.952749508
12	0	1	32.19502544	29.5987528	0.916251886

From the above table, we can measure the various portfolios out of that the best portfolios are 4th row which shows 1.238992483 as the highest Sharpe Ratio. Now to see more about this Portfolio other than Optimum Portfolio is will compare Risk and return with Correlation for this particular Portfolio. The Risk for this Portfolio is

26.72, and 33.08 is the Return of the Portfolio. The correlation for this individual Portfolio is 56%. So, an investor can ignore this Portfolio as it is more than 70% investing in Infosys and less in Tech Mahindra. Because as per my opinion, supporting more than 70% is like putting the majority of the eggs in one basket, which will be more risk in the future.

Table 11: Construction of 12 portfolios by changing % of the money invested in both the stocks

Portfolio	Weight-INFO	Weight-WIPRO	Portfolio-Risk	Portfolio-Return	Sharpe Ratio.
1	1	0	28.23945777	34.11877078	1.204653824
2	0.96	0.04	27.65244227	34.31537966	1.237336627
3	0.86	0.14	26.40396196	34.80690187	1.314458107
4	0.76	0.24	25.50383075	35.29842408	1.380123026
5	0.66	0.34	24.9897197	35.78994629	1.428185138
6	0.56	0.44	24.8855647	36.2814685	1.453913903
7	0.5	0.5	25.02281858	36.57638182	1.457724745
8	0.36	0.64	25.90743919	37.26451291	1.434511247
9	0.26	0.74	26.98692722	37.75603512	1.395343561
10	0.16	0.84	28.39291476	38.24755733	1.343559041
11	0.06	0.94	30.07965272	38.73907954	1.284558698
12	0	1	31.20783912	39.03399286	1.24757093

From the above table, we can see so many possible portfolios. Still, as an investor, it's always better to choose the best optimum Portfolio with the highest Sharpe Ratio, 1.457724745. Now will compare the Risk and Return of the investor to Correlation. Its Risk is 25.02, and its Return is 36.76. It correlates with less than 50%, 46%, but the decision will be based on the highest Sharpe Ratio with more returns and less risk.

This is the best Portfolio because making half of the investment in one company and the remaining half in another is good.

Table 12: Construction of 12 portfolios by changing % of the money invested in both the stocks

Portfolio	Weight-HCL	Weight-WIPRO	Portfolio-Risk	Portfolio-Return	Sharpe Ratio.
1	1	0	32.22	38.41	1.188967042
2	0.96	0.04	31.56	38.44	1.214663886
3	0.86	0.14	30.09	38.5	1.276329344
4	0.76	0.24	28.89	38.56	1.331196319
5	0.66	0.34	28.02	38.62	1.374953514
6	0.56	0.44	27.49	38.69	1.403458164
7	0.46	0.54	27.34	38.75	1.413694895
8	0.36	0.64	27.56	38.81	1.404624565
9	0.26	0.74	28.15	38.87	1.377497037
10	0.16	0.84	29.08	38.93	1.335453904
11	0.06	0.94	30.33	39	1.282645908
12	0	1	31.21	39.03	1.24757093

The above table shows different portfolios for an investor. Still, as a rational investor, it's always advisable to prefer the optimum Portfolio, which has the highest Sharpe Ratio in the above table, 1.413694895, in the 7^{th} column. To understand better about Optimal Portfolio will compare Risk and return with Correlation for this particular Portfolio which determines 49%. So, the investor can invest in this specific Portfolio as there is a higher Return and higher Sharpe ratio.

Table 13: Construction of 12 portfolios by changing % of the money invested in both the stocks					
Portfolio	**Weight-HCL**	**Weight-TECH MAHI**	**Portfolio-Risk**	**Portfolio-Return**	**Sharpe Ratio.**
1	1	0	32.22	38.41	1.188967042
2	0.96	0.04	31.82	38.06	1.193034854
3	0.83	0.17	30.71	36.92	1.198891964
4	0.76	0.24	30.25	36.3	1.196683325
5	0.66	0.34	29.77	35.42	1.186164448
6	0.56	0.44	29.52	34.54	1.166483077
7	0.46	0.54	29.49	33.65	1.137626454
8	0.36	0.64	29.7	32.77	1.100210862
9	0.26	0.74	30.12	31.89	1.055417867
10	0.16	0.84	30.76	31.01	1.004830763
11	0.06	0.94	31.6	30.13	0.9502188025
12	0.01	0.99	32.09	29.69	0.9219545978

We have noticed in an above table, portfolios available, but as a rational investor, it is always good to recognize the Portfolio with the highest Sharpe ratio. But in this Portfolio, we can see the 3rd row as an optimal portfolio. Still, as a rational investor, it's advisable to reject this Portfolio as an investor has to invest more than 80% of his money in HCL and the remaining 17% in Tech Mahindra. So, investing 83% in HCL is similar to putting all the eggs in one basket where an investor can incur losses in the future rather than gain. Here the decision will also not be based on Returns and Risk because the returns will decrease continuously for this Portfolio.

Table 14: Construction of 12 portfolios by changing % of the money invested in both the stocks					
Portfolio	**Weight-WIPRO**	**Weight-TECHMAHI**	**Portfolio-Risk**	**Portfolio-Return**	**Sharpe Ratio.**
1	1	0	31.20783912	39.03399286	1.24757093
2	0.96	0.04	30.70962177	38.65658326	1.255521268
3	0.86	0.14	29.63308217	37.71305925	1.269292848
4	0.78	0.22	28.95958389	36.95824005	1.272747571
5	0.66	0.34	28.28974005	35.82601124	1.262861065
6	0.56	0.44	28.06172725	34.88248723	1.239499156
7	0.46	0.54	28.14218361	33.93896323	1.202428486
8	0.36	0.64	28.52849941	32.99543922	1.153072888
9	0.26	0.74	29.20854117	32.05191521	1.093923693
10	0.16	0.84	30.16244841	31.10839121	1.028046224
11	0.06	0.94	31.36524397	30.1648672	0.9585408367
12	0	1	32.19502544	29.5987528	0.9162518865

From the above table, we can make many portfolios, but the best decision for an investor will be based on Optimal Portfolio, which has the highest Sharpe Ratio. But this investor can decide to invest based on the market condition for this Portfolio, or he can reject it because investing more than 75% is not good in one company. But in another way, if we look into Portfolio returns other than Sharpe Ratio Returns for this particular Portfolio keeps on decreasing by the way Risk for the Portfolio increasing. So, an investor can reject this Portfolio and look into other different portfolios.

DISCUSSION:

For selecting the best Portfolio after analysing market conditions and noticing that if the company doesn't have any business problems, the Markowitz model helps in knowing which Portfolio is best for an investor from the number of available opportunities under different portfolios. I would like to compare individual stock

returns with the portfolios created using the Markowitz model. When we notice particular stock for all the top-five IT companies, Expected Return is suitable for all the companies. But as a rational investor, it is always good to invest the money in two companies because in case if investor incurs a loss in one company, they would gain in another company. So as a middle-class person, they would like to invest in two companies and more than that. So, Markowitz helps the investor maximise the returns for the same level of Risk, or some portfolio's returns will be more than the Risk. So, from the analysis, I have found ten portfolios in this particular Top 5 IT companies. Out of these 10 Portfolios, the best portfolios are TCS and Infosys, TCS and Wipro, Infosys and HCL Technologies, Infosys and Wipro and HCL Technologies and Wipro. These are the best portfolios that the investor can prefer to invest in. But other five portfolios have their ratio in such a way that investing more than 70% in one company and 30% in another company. So in my opinion, a rational investor will not invest in such a Portfolio. An investor should reject that particular Portfolio and choose the best Portfolio which maximizes returns and minimize the Risk or maximize the Return for the same amount of Risk. So, it is always essential for an investor to prepare a portfolio that helps in decision making of which is the best Portfolio instead of choosing random two companies and investing in those companies, which can cause issues in future.

SUGGESTIONS:

1. TCS and Infosys are useful for one who wants to take more risk as the price of TCS are more than 3500 and Infosys is more than 1500. But when we notice through Demography wise one who wants to invest in the stock market with Rs. 5000 or more can invest in this particular portfolio.

2. TCS and Wipro are useful for one who wants to invests more than Rs 4000 and since the investment is more even risk will also be more as there will be a volatility in stock market. Currently the stock price of TCS is more than Rs.3500 and Wipro’s stock price is more than Rs. 500.

3. Infosys and Wipro are useful for one who will have minimum risk as the price of Infosys may reach to Rs. 2000 and Wipro is near to Rs. 600. It keeps on

fluctuating depending on daily price rates. The one who are interested to invest more than 2500 in stocks then this particular portfolio is useful.

4. Infosys and HCL Technologies are useful for one who wants to invest more than Rs. 2000 in stocks then this particular portfolio is useful, as Infosys is currently having a price of more than Rs. 1500 and Wipro has more than Rs. 500.

5. HCL Technologies and Wipro are useful for one who wants to invest more than Rs. 1500. The risk may vary from high to medium depending volatility in stock market.

MANAGERIAL IMPLICATIONS:

Investment portfolios which are part of shareholders investments will be used by IT companies long term activities, ongoing IT services, different projects depends latest technologies as and when the technology transforms it demands IT companies to come up with different new projects which helps the company to invest in these shareholders capital and get more profit and also helps to keep good market condition, so shareholders will get better return on their investment.

CONCLUSION:

The above discussion shows how the Markowitz model plays an important role in selecting the best portfolios compared to individual stock returns and Risk. Investment is always subjected to risk. Markowitz Model made it easy for an investor to invest in the best portfolio. So, after researching the company profile and its market condition, it is always advisable for an investor to create portfolios of those companies and choose the best Portfolio from the number of available portfolios and invest in those portfolios rather than investing in an individual company or two random companies. Because investing in a particular company is "putting all the eggs in one basket", investing in random two companies can make an investor incur more Risk. It is similar to individual stock if an investor invests more than 70% in one company and the remaining 30% in another company where there will be a more chance of making a loss than a gain. The correlation will also help an investor know the compensation between the higher Risk and higher Return and the Markowitz model, allowing

potential investors to decide based on the best Portfolio available from several portfolios.

LIMITATIONS:

This research is valid only for investors who want to invest in two companies instead of one company. But future researchers can concentrate on other models that include more than three companies in each Portfolio and can try to link with other sectors that have more earnings and make it easy for an investor to choose the best Portfolio for their decision-making. Also as the data becomes old in the upcoming future days this can be used for education purpose for getting more practical idea of what is Markowitz model through Sharpe Ratio and you can decide the best portfolios for the analysis.

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MIGRATION BETWEEN THE STATES OF INDIA: CHANGES DURING 2001 TO 2011

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Abstract

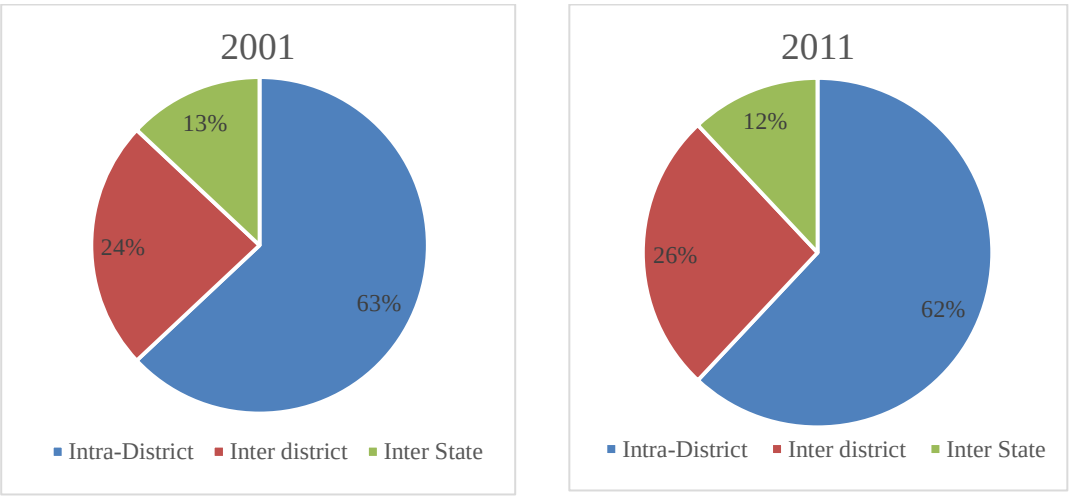
The crisis of return migration of interstate migrants in India during lockdown caused by the Covid-19 pandemic attracts attention to interstate migration and its various aspects. Interstate migration is the key income generation strategy for the people in less progressive states of India. They move to advanced states in search of better economic and social opportunities. All Indian states are not standing at the same level of economic development. The disparities in industrial and agricultural development further widen the regional differences, promoting interstate migration. The backward states, such as Bihar, Uttar Pradesh, Madhya Pradesh, Rajasthan, and West Bengal, are involved as migrant senders, and progressive states like Maharashtra, Delhi, Gujarat, Haryana, Karnataka, etc. are the migrant receiver. Interstate migration is one way by which redistribution of income among Indian states from high-income states to low-income states. Interstate migration increased from 42.3 million in 2001 to 54.3 million in 2011. The increment in interstate migration is 28.4 percent during the same decade. Therefore, it would be indispensable to explore various aspects of interstate migration, such as trends, patterns, nature, and reasons for migration. This study used secondary data on migration from the Census 2001 and 2011.

Keywords: *interstate migration, regional disparity, progressive and backward states.*

INTRODUCTION: INTERNAL MIGRATION INDIA

The volume of internal migration in India is continuously increasing; for all duration, it rose from 314.54 million in 2001 to 455.79 million in 2011. The migratory population in India is increased by nearly 45 percent. In contrast, inter-state migration increased by 28.4 percent in 2011. Interstate migration for all duration has risen from 42.3 million in 2001 to almost 54.3 million in 2011. Interstate migrants represented only 4 percent of the Indian population in 2011, and this rate has been nearly unchanged since 2001 (De, 2019).

Figure 1: Distribution of internal Migrants in India by types of Migration



Source: Census 2001 and 2011

Figure 1 explores the movements of the migrants in India between 2001 and 2011. Intra-state migration (including intra-district and inter-district) is acquiring a larger share of internal migration than interstate migration in both decades (De, 2019). Intrastate migration increased from 87 percent in 2001 to 88 percent in 2011. Even in intra-state migration, inter-district movement is increased from 24 percent to 26 percent. Contrary, the share of interstate migration in total internal migration was reduced from 13 percent in 2001 to 12 percent in 2011.

Therefore, it would be essential to explore various aspects of interstate migration, such as trends, patterns, nature, and reasons for migration. This study used secondary data

on migration in Census 2001 and 2011. Migrants are moving from the low-developed Indian states to more developed states in search of better livelihood opportunities. All Indian states are not standing at the same level of economic development. The disparities in industrial and agricultural development further widen the regional differences that promote interstate migration. In India, significant migration flows are identified from backward states such as Bihar, Uttar Pradesh, Madhya Pradesh, Rajasthan, and West Bengal to progressive states like Maharashtra, Delhi, Gujarat, Haryana, Karnataka, etc. Interstate migration is one way by which redistribution of income among Indian states from high-income states to low-income states.

LITERATURE REVIEW

The study of Das and Shah (2017) stated that people moved to those states where the rate of urbanization and level of economic development are high compared to states with fewer employment opportunities. Regional disparities based on economic development among Indian states are the primary cause of interstate migration.

According to Rele (1969), the movement of people is also determined by the process of change occurring within the social system. James (2011) says in his study that interstate migration is one of the measures to bridge the gap between labour deficit state and surplus state. In India, the a large inflow of migration from northern states to southern states where fertility is low. Battacharya (1998) highlights that the rural to urban and urban to urban streams are most important in interstate migration. The main reason for these streams of migration between states is employment. Kundu (1986) argued that economically prosperous states had a high percentage of interstates immigrants. Moreover, the poorer states are characterized by a high out-migration rate. The share of males as compared to females in interstate migration is low.

Further, Kundu and Gupta's (1996) study on male migration shows that inter-state migration declined during the 1960s and 1970s because most labourers were absorbed in their states for employment. That reduced the cross-state mobility of the population. Another reason was the deceleration of growth in the large cities in some forward states. However, the lifetime interstate migration rate is recorded higher in developed states like Gujarat, Maharashtra, Punjab, Haryana, etc., than in short-term migration.

Sundari (2005) stated that migration plays a livelihood strategy for women in south India. Tamil Nadu receives female immigrants from neighbouring states like Kerala, Andhra Pradesh, Maharashtra, and even Rajasthan. The push factors such as lack of employment and drought in the place of origin, contrary pull factors like favourable employment situations at destination areas are significant causes of migration. Interstate migrants play a crucial role in the development of the destination state. However, they are also suffering from many economic and social problems. Omidyar Network India (2021) study highlights the issues of interstate migrants at destination places where these migrants are living in unsafe conditions and face many problems. Migrants often have hazardous, unsanitary, dirty, and untidy working and living conditions and limited access to health and social services. The migrants are unfamiliar with the local culture and language, which adds to their vulnerability. This type of migration is increasing the casualization of the workforce in India.

Trend of Interstate migrants during 1991 to 2011

Figure 2: Trend of Interstate Migration by last residence with duration (0-9 years) (in Millions)

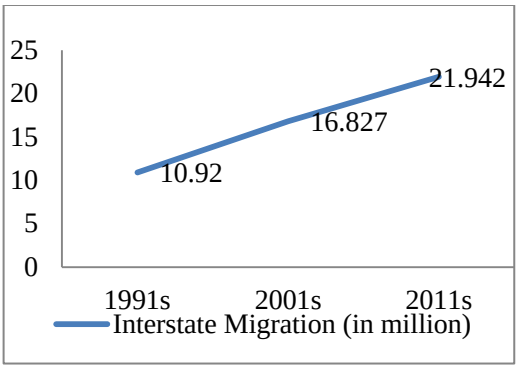
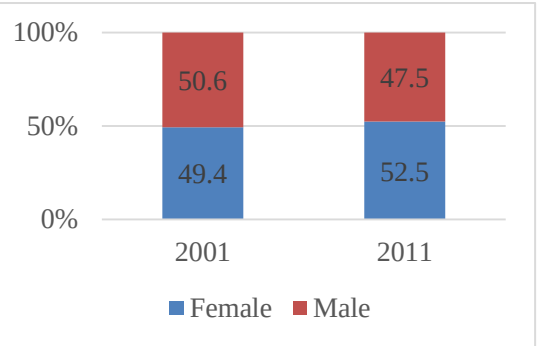


Figure 3: Gender Composition of Interstate Migrants (in percentage)



Source: Census of India 1991, 2001 and 2011.

Figure 2 shows that interstate migration from 1991 to 2001 increased by 54.1 percent. Furthermore, it grew from 2001 to 2011 by 30.4 percent. It shows that outstate migration declined by nearly 25 percent in 2011 compared to 2001. State governments launched many developmental programs, which created many education, employment,

and better livelihood opportunities, reducing migration from backward states. Now they can find the means of livelihood in their states (Kundu and Gupta, 1996). Furthermore, interstate migration is affected by the unfriendly migrant policies of the destination states and the low rate of urbanization in India (Aggarwal Priyansha Singh and Rohini Mitra, 2019). Policy hurdles such as i) low interstate portability of PDS cards, ii) preferential norms in educational institutions, and iii) domicile requirement in state government jobs were playing as indirect hurdles in interstate migration (De, 2019).

Causes of Migration between Indian States

Migration between the states of India is caused by various economic, social, and political factors. Census addresses these factors in the data as migration for employment, business, education, marriage, etc.

Table 1: Reasons for interstate migration (0-9 years) (in percentage)

Reasons for migration	2001			2011		
	Person	Male	Female	Person	Male	Female
Work/employment	31.85	56.74	6.42	27.37	50.90	6.10
Business	1.85	3.25	0.40	1.34	2.23	0.53
Education	2.63	3.82	1.41	2.48	3.51	1.54
Marriage	22.31	0.70	44.56	23.70	1.31	44.00
Moved after Birth	3.80	3.93	3.66	4.30	4.74	3.90
Moved with Households	23.12	21.76	36.65	29.54	23.71	34.82
Other	8.44	9.82	7.01	11.28	13.60	9.20

Source: Census of India 2011.

Employment was one of the dominant reasons for crossing the state's borders for laborers; male migrants had a larger share of 50.9 percent than females in 2011. Marriage is the dominant reason for female migration between states, with 44 percent in 2011. Migration for employment/work reasons was recorded at 31.85 percent during 2001, which declined to 27.37 percent in 2011. Male migration (nearly 6

percent) is reduced more than female migration (0.34 percent). Many people who thought of migrating for work in other states now got jobs in their states. Interstate migration for business purposes also declined from 1.84 percent in 2001 to 1.34 percent in 2011. The share of male migrants declined from 3.25 percent to 2.23 percent. Contrary female migrants increased from 0.40 percent to 0.53 percent of the related total migration.

Changing Streams: New origins of Interstate Migrants

The main characteristic of Interstate migration before 2001 was the high involvement of rural migrants, who selected the urban destinations in other states. However, in 2011 the pattern of interstate migration getting changed. Rural to urban migration declined, but urban to urban migration between states increased. The Urban originated migrants rose during 2001 to 2011. It shows in the changes of origin place in 2011 compared to 2001.

Table 2: Streams of Migration under Interstate migrants (0-9 years) (in millions)

Streams of migration	2001			2011		
	Persons	**Male**	**Female**	**Persons**	**Male**	**Female**
Rural to Rural	4.474 (26.6)	1.759 (20.7)	2.715 (32.7)	4.490 (20.5)	1.546 (14.8)	2.944 (25.6)
Rural to Urban	6.373 (37.9)	3.804 (44.7)	2.569 (30.9)	8.077 (36.8)	4.507 (43.2)	3.571 (31.0)
Urban to Urban	4.490 (26.7)	2.202 (25.9)	2.289 (27.5)	7.154 (32.6)	3.366 (32.3)	3.787 (32.9)
Urban to Rural	1.053 (6.3)	0.523 (6.1)	0.530 (6.4)	1.393 (6.3)	0.622 (6.0)	0.771 (6.7)
Unclassified	0.436	0.224	0.212	0.828	0.384	0.444
Total	16.827	8.512	8.315	21.942	10.425	11.517

Source: Census of India 2001, 2011.

Male migration is high in rural to urban and urban to urban because of the progress of industrial development in urban centers, which attracts more male migrants. The service sector also contributed significantly to pulling migrants from rural

backgrounds. Female migration from rural to rural and rural to urban because of the development of the construction sector (Ray and Dutta, 2019). Streams of rural-to-rural and rural-to-urban migration went down to 20.5 percent and 36.8 percent in 2011 from 26.6 percent and 37.9 percent in 2001, respectively. On the other hand, urban to urban migration between states increased by nearly 6 percent in 2011 compared to 2001. The skilful labourers may be crossing the states' borders for employment reasons, which was not experienced during or before 2001.

Migration for duration of residence

The nature of migration helps to understand whether migrants changed their residence for the short term[1]/temporary or lifetime period. Census has defined the term temporary migration in which migrants stay in the destination for less than one year. Temporary migration is mainly associated with agriculture seasons in rural areas. During the off-season of agriculture, labourers migrate, searching for employment in the urban informal sector (Keshari and Bhagat, 2010). Temporary migration is seven times larger than permanent labour migration. Moreover, it is primarily a rural phenomenon dominated by rural to urban migration. The central and north Indian states' low economic, educational and social status significantly induces temporary labour migration (Keshri and Bhagat, 2013).

Table 3: Duration of residence of interstate migrants (in millions)

Residence period	2001			2011		
years	Persons	Male	Female	Persons	Male	Female
Less than 1	2.015	1.142	0.872	3.532	1.975	1.557
	(12.0)	(13.4)	(10.5)	(16.1)	(18.9)	(13.5)
1 to 4	8.277	4.253	4.023	9.990	4.705	5.284
	(49.2)	(50.0)	(48.4)	(45.5)	(45.1)	(45.9)
5 to 9	6.535	3.116	3.419	8.420	3.745	4.675
	(38.8)	(36.6)	(41.1)	(38.4)	(35.9)	(40.6)
All Duration	16.827	8.511	8.314	21.942	10.425	11.516

Source: Census of India 2001, 2011.

[1] As per NSSO report on Migration in India 2007-08 that in short term migration person is changing its residence period for one month to 6 months in one year.

A large number of inter-state migrants are preferred to migrate for a lifetime period. It is from table 3 that during 2001 nearly 12 percent (2.015 million) migrated for less than one year. This percentage increased during 2011 by 16.1 percent (3.532 million). Migration for less than one year is increased by more than 75 percent, in which the share of female migrants (78.5 percent) is comparatively higher than the male migrants (73 percent). Migration for 1 to 4 years and 5 to 9 years declined. Migration for these durations reduced from 49.2 percent and 38.8 percent in 2001 to 45.5 percent and 38.4 percent in 2011, respectively. It shows that the percentage share of interstate migration for more than one year declined in 2001-11. Interstate migrants prefer to work for a short period in other states and live in their states. They want to improve their lives compared to those in their native places. Improving economic status gives them a sense of pride, respect, and upliftment of social status.

Interstate Migration in Indian States

Table 4: Interstate Migrants in major Indian States (0-9 years) (in millions)

Rank	States	2001	2001 share in %	2011	2011 Share in %	Change (in %)
1	Maharashtra	3.231	19.2	3.821	17.4	18.0
2	Delhi	2.172	12.9	2.290	10.4	5.3
3	Haryana	1.231	7.3	1.575	7.2	28.0
4	Gujarat	1.125	6.7	2.027	9.2	**80.1**
5	Uttar Pradesh	1.080	6.4	1.482	6.8	37.4
6	Karnataka	0.880	5.2	1.541	7.0	**75.3**
7	Madhya Pradesh	0.814	4.8	0.942	4.3	15.7
8	Punjab	0.811	4.8	1.020	4.6	25.7
9	West Bengal	0.724	4.3	0.730	3.3	0.7
10	Rajasthan	0.723	4.3	0.506	2.3	**-30.0**
11	Jharkhand	0.502	3.0	0.684	3.1	36.2
12	Bihar	0.460	2.7	0.338	1.5	**-26.5**
13	Andhra Pradesh	0.421	2.5	0.635	2.9	**50.4**

14	Uttarakhand	0.352	2.1	0.549	2.5	**55.8**
15	Chhattisgarh	0.338	2.0	0.485	2.2	43.2
16	Tamil Nadu	0.270	1.6	0.698	3.2	**158.4**
17	Kerala	0.235	1.4	0.328	1.5	39.8
18	Odisha	0.229	1.4	0.319	1.5	39.2
19	Rest	1.221	7.3	1.975	9.0	61.8
20	**Total**	**16.827**	**100**	**21.942**	**100**	**30.4**

Source: Census of India 2001, 2011.

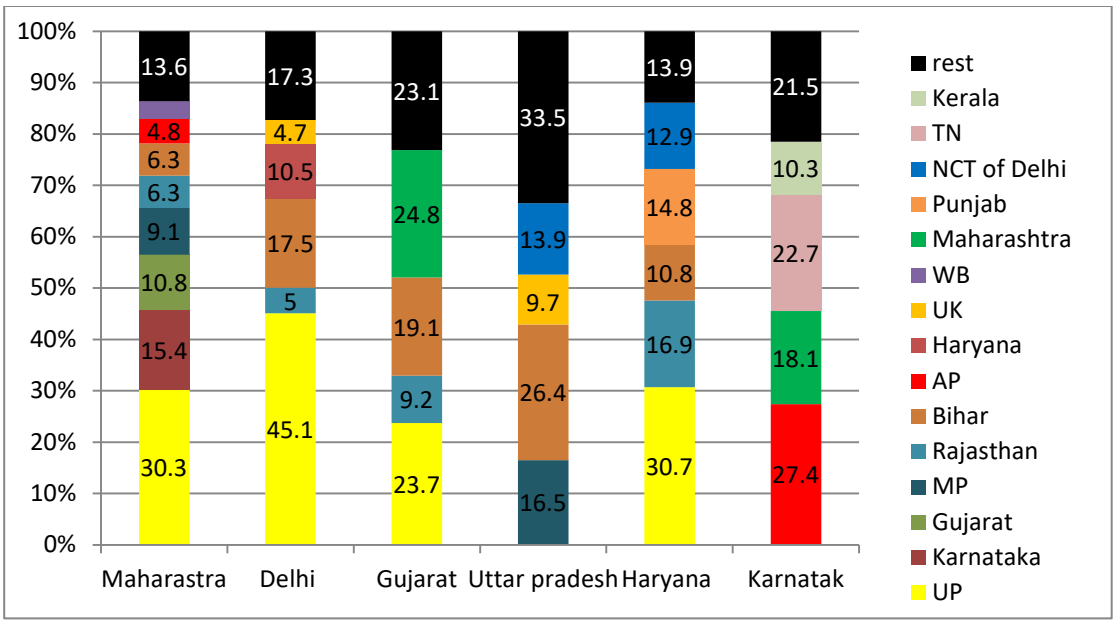
The above table 4 expresses the movement of India's people between states is risen nearly by 30.4 percent during 2001-11. Six states such as Maharashtra (17.0 percent), Delhi (10.0 percent), Gujarat (9.0 percent), Uttar Pradesh, Haryana, and Karnataka (each 7.0 percent), contributed 58 percent share of total interstate immigration in 2011. There is a minor increase in their share compared to 57.7 percent in 2001. The percentage share of Maharashtra, Delhi, Rajasthan, Punjab, West Bengal, Madhya Pradesh, and Bihar in total interstate migration declined in 2011. In the case of Maharashtra, industrial development is not widespread in the entire state. It is restricted only to a few districts and cities like Mumbai, Pune, Nashik, Nagpur, Kolhapur, and Aurangabad. Some political parties spread hatred against Bihari and Uttar Pradesh migrants, which led to attacks and atrocities on these migrants. Delhi every day becoming congested with migrant flows. Delhi is struggling to provide basic facilities to its citizens.

On the other hand, the share of Gujarat, Karnataka, Uttar Pradesh, Tamil Nadu, and Andhra Pradesh is increased. This indicates the emergence of new destination states for interstate migrants. Comparing the figures in 2011 and 2001 uncovered the striking trend of interstate migration. Tamil Nadu received more than 158 percent, followed by Gujarat at 80 percent, Karnataka at 75 percent, Uttarakhand at nearly 56 percent, and Andhra Pradesh at more than 50 percent as compared to 2001. Karnataka state has a higher per capita income than the national level (Suryanarayana, 2009). Gujarat was the fastest-growing state during the 1990s and afterward (Unni, et al. 2001). It is

centre for extensive industrial sector investment, generating employment opportunities, and attracting interstate migrants to Gujarat (Dholakiya and Sapre, 2011; Sugandhe, 2017). Interstate migrants in Andhra Pradesh majorly are from neighbouring states. During 2001-11, the productivity of the industrial sector was high, and the economic growth was satisfactory (Manonmani, 2014).

Table 4 highlights that the flow of in-migration in Rajasthan and Bihar decreased by -30.0 percent and -26.5 percent from 2001 to 2011. The flow of in-migration in Rajasthan and Bihar is recorded negatively. It is probably because of widespread poverty, low industrial development, lack of job opportunities, and political instability in the state.

Figure 4: Top Six Interstate Migrants Receiver States



Source: Census of India 2011.

Figure 4 highlights the top inter-state migrant's receiver states and interstate migration corridors. Maharashtra (45.2 percent), Delhi (97.5 percent), Gujarat (42.5 percent), and Karnataka (38.5 percent) are highly urbanized, and industrialized states, the percentage of the urban population of these states is much higher than the Indian urban population, 31.1 percent. On the other hand, Uttar Pradesh, Bihar, Madhya Pradesh,

Rajasthan etc., are densely populated, and less urbanized states are major migrant senders (Rajan and Bhagat, 2021). In the case of Maharashtra, more than 65 percent of interstate migrants originated from Uttar Pradesh, Karnataka, Gujarat, and Madhya Pradesh. Except for Uttar Pradesh, the remaining three states share boundaries with Maharashtra, which causes more interstate migrants. The same situation is also seen in the case of Delhi, Gujarat, Uttar Pradesh, and Karnataka, as they received more migrants from neighbouring states. An increase in seasonal employment in the agriculture sector of Uttar Pradesh and Haryana attracted many Bihari landless wage workers to these states (Fazal, 2016) (Rajni, 2007). Karnataka increased its income during the 1990s and 2000s (Dadibhavi and Bagalkoti, 2006), which attracted migrants majorly from Andhra Pradesh, Maharashtra, Tamil Nadu, and Kerala.

CONCLUSION

The number of interstate migrants increased from 2001 to 2011. The Interstate migration rate declined after the economic reforms of 1991 in India. Migrants from the low-income states can now find the means of livelihood in their native states, and increasing discriminatory behaviour of the people and the state government at destination places are major factors in reducing the pace of outstate migration. The participation of rural originated migrant labourers declined. Interstate migration in India is characterized by the balancing supply and demand of the workforce generated by regional inequality. The growth of industrial development in urban centres during 2011 required skilful labour, which was impossible for rural society. That is the primary reason for the shift in the origin areas of interstate migrants from rural to urban. The interstate migration in 2011 witnessed the high participation of migrants from the urban areas. The uneven development of Indian states and unequal urban growth attracts migrants.

Out-migration is recorded high from low-income states, and immigration is recorded high in high-income states. The low-income states are Uttar Pradesh, Bihar, Madhya Pradesh, Rajasthan, Odisha, and West Bengal, contributing a larger share in out-migration in India. Contrary to the state of Maharashtra, Delhi, Gujarat, Haryana, Karnataka, and even Uttar Pradesh are receiving large migrants from the other Indian states.

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BACKWARD LINKAGE OF INDIGENOUS EDUCATION SYSTEM OF DIGITISATION DURING COVID TIMES IN INDIA

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Abstract:
During the pandemic, with no physical classes held throughout the world, education started being delivered through the online mode. This is when people realized the importance of digital resources and network connectivity. With 84% of the rural population in India having poor access to the internet and network connectivity, it became difficult to penetrate through the rural education system by completely replacing the traditional teaching methods with online teaching-learning methods. UNESCO 2021 report indicates 1.2 lakhs schools in India are run by single teachers. With this backdrop and limited access to resources, especially, the areas with poor network connectivity and limited access to digital resources turned back to indigenous ways of learning. This paper using the data triangulation method, highlights the importance of *"doorstep learning"*, through case studies of the rural areas of Maharashtra, India. The two districts used for comparative analysis have been chosen based on the stark difference in the network connectivity. Pune, being the second most

urbanised district in the state has robust network connectivity, whereas Ratnagiri, due to its geographical location does not enjoy the same. Based on primary data collected through in-depth interviews, reports, and pictures, this paper highlights the adaptability and flexibility used by the teachers of these regions for successfully delivering education during the pandemic. This paper highlights the importance of *indigenous education style* in rural India even during present times. "Doorstep education" can be used in developing countries with similar geographical limitations, like: African countries and south-east Asian countries, like Bangladesh, Nepal, and Sri Lanka. This study confirms that digital education of teachers facilitates quality digital learning for students.

Keywords: *Online Education; E-learning; Indigenous Education; Rural areas; Maharashtra; Case study.*

INTRODUCTION

Ancient Indian universities like Nalanda and Taxilla attracted students from all over the world and were well known for their rigorous education system. Historical references and research done pre and post during the colonial period in India show the existence of a robust indigenous education system that was forcibly uprooted by the western educated system (Dharampal, 1983). The glorified history of the Indian education system, where universities like Taxilla and Nalanda flourished and attracted students from all across the world, was majorly based on the framework of the indigenous style of teaching and learning. The pre-British educational period in India consisted mainly of Indigenous education, which promoted local knowledge, rituals, arts, crafts, and occupations, taught by single gurus or teachers. The idea behind going back and promoting indigenous knowledge and learning has been the concept of sustainable development, which is being now promoted by the United Nations as SDGs (Sustainable Development Goals).

The indigenous style of learning promotes skill enhancement and gives more space and freedom to the learner without restricting the student into a fixed pedagogy or methodology of teaching a subject. Studies and research conducted on the existing education system in India showed around 1.2 lakhs schools are run by a single teacher

(UNESCO, 2021). These schools were primarily religious in nature, for example, 'pathshalas' for Hindus and 'madrasas' for Muslims, and were symbiotic with the country's social structure. After the British set up their rule in India, an extensive study was conducted on India's existing institutes or places of education. Research conducted by the British during 1800-1850 on the education systems of Bengal, Bihar, Madras presidency, and Punjab, was based on the caste break up, girls' education, and enrolment ratio. Studies on India's pre-colonial education system have indicated a deliberate and planned replacement of the indigenous education system by western pedagogy in the society to establish the superiority of the British Empire in India (Dharampal, 1983).

Around 32 million children were out of school even before the pandemic began (NSSO 2014). A recent survey by the Ministry of Rural Development of India highlighted that more than 36% of the schools operate without electricity. It can well be imagined that the condition of the underprivileged population during the pandemic with less than 15% of the population having access to the internet in rural areas (NSSO 2017-18), deteriorated.

With the already existing massive digital-gender divide in rural areas, this pandemic with the complete shift to the distance learning mode has created a situation that might lead to an increase in the adverse social practices, like child marriages and girl-child dropout rates, skewed labour force participation rate.

Although the western education system became heavily dependent on the online education provided through internet access, some of the most innovative and successful experiments done by the teachers in tribal, rural areas with limited internet access were based on the framework of the Indian indigenous education system.

Given the backdrop of the NEP (New Education Policy) 2020, which focuses on indigenous methods and knowledge, the use of these styles during the pandemic saw a success rate much higher than the standard teaching methods adopted by the teachers. NEP focuses on promoting inclusion and excellence in the Indian education system by strengthening both liberal and professional education.

During the lockdown, when there was an absence of post-colonial established methods of teaching, the world turned to e-learning methods. Remote learning became the way of education. While the world was fighting with the looming pandemic and teachers were learning new technology to combat the increasing gap in imparting education, rural India faced the impact of the largest digital divide. In the process of finding alternatives to western education, which was falling apart, indigenous education practices helped learn students lessons beyond the syllabus.

This paper brings forth such cases and successful experiments conducted across rural areas of Maharashtra, namely Salpe village (Lanja taluka, Ratnagiri district), Nande village (Mulshi taluka, Pune district), and Solapur District.

THEORETICAL BACKGROUND

The history of education in India traces back to the ancient, pre-historic period, where the use of vedas and upanishads was a way of learning. Research work and details of this education system mentioned in a book written by Professor Altekar, gives a detailed description of how a one-teacher school was the essence of the Indian education system. The backbone of the one-teacher school system in ancient India was mainly religion-dominated. The beginning of the education was done after the 'chaula' or 'mundan' ceremony, which was around the 4th-7th year from the birth of the child. This coincides with the age recommended by the NEP (National Education Policy 2020) for the beginning of education. This was irrespective of the caste system prevalent in the society at that point. This was supposed to be the initiation process for education for both male and female children.

Similar findings can be seen in the book written by Nurullah and Naik, which talks about the research studies conducted by a zealous missionary by the name of William Adam in the colonial period of India, in the provincial states of Bengal, Madras, and Bombay. This gives the details of the education system of pre-colonial India where the indigenous education system was prevalent in the preliminary schools. These elementary schools mostly were run in temples or private dwellings and dealt with rudiments of reading, writing, and arithmetic.

Dharampal in his book, 'The beautiful tree', recalls the famous statement given by Mahatma Gandhi at Royal Institute of International Affairs, London in 1931, where he firmly and fearlessly puts forth his concerns about the decay of the Indian education system due to the uprooting of the indigenous style of learning by the British.

Another famous book written on a similar subject written by Synderlal in 1929, named, *'Bharat me angreji raj'*, depicts the entire picture of the pre-colonial to colonial India and the systems.

Pertaining to the present condition of the education system during the pandemic, several articles in newspapers talk about the digital divide between urban-rural India which deepened due to the economic crisis during the Covid-19 (Nikore & Uppadhyay, 2021). Although a general study done among states of India represents a better picture of Maharashtra, where the accessibility of digital resources to families with school-going children is more than 30%. The detailed, district-wise study done shows a stark difference in various districts within the state (ASER 2020).

It shows that around 33% of the children enrolled in the government schools in rural areas of Maharashtra do not have access to mobile phones, hence could not get access to study material during the pandemic.

Various reports and studies were done during the pandemic have highlighted the flaws in the western education system especially during the pandemic times, when it entirely became dependent on online education through digital resources.

As per the ground realities, even today, around 84% of the rural population in India has poor access to the internet and network connectivity remains a concern. Therefore, better and indigenous teaching-learning methods can be a way forward to successfully implement better education in these areas.
This paper highlights and compares two different case studies in other villages of Maharashtra and tries to indicate the adaptability and modified approach of teaching-learning necessary for the rural areas of India.

RESEARCH METHODOLOGY

Based on qualitative research design, this paper uses descriptive, collective-case study analysis for analyzing the work done by the teachers in remote, rural areas. For this purpose, the study uses primary data as its source of information. This analysis is based on the data collected through in-depth interviews, reports, and pictures from the teachers in these areas who have done commendable work during the pandemic. Data collected through various methods is then used and verified through triangulation of data methods, which tends to remove any bias brought in by one method of data collection.

The feasibility of these approaches has been studied by comparing homogeneous factors. The variables used for undertaking the comparative study are geographical area, the population of the area, gross enrolment ratio of the school, gender ratio, types of technology used for teaching during the pandemic, accessibility of the students to the digital devices and internet, teacher-student ratio and structure of the school. The outcome of this teaching-learning is then compared for the two cases and a conclusion is drawn based on the triangulation of the data collection approach.

The first case talks about the initiative taken by a group of teachers to train the primary teachers of rural areas of Maharashtra during the pandemic. This resulted in several significant outcomes in terms of the e-learning methods used by them to deliver education to the students belonging to the underprivileged and rural areas. The next two cases are a comparative study based on several homogenous parameters to find out whether rural areas of Maharashtra have been successful in implementing quality education during the covid pandemic or not. The samples selected for this study have been taken based on the accessibility of the network connectivity and major initiatives taken by a single teacher with the help of co-teachers. This research takes the comparative study and tries to find out the feasibility of e-learning in the rural area of Pune district (one of the most urbanized areas with good network connectivity) with the rural area of Ratnagiri district (one of the remotest and rural areas with bad network connectivity due to forests and western ghats).

3.1 Case Study 1: TSTS (Techno Savvy Teacher Secondary) Maharashtra

The initiatives to make teachers of public schools and zilla parishads in Maharashtra began much before the covid pandemic in 2011, when Mr. Sandeep Gund, a government primary school teacher from Pashtepada Thane, introduced the use of technology in classroom education. This model became renowned and successfully adopted by some thousand government schools in Maharashtra after 2015. It was also adopted by the CSR arm of a company Precision Camshaft Ltd. Later in 2017, TSTS started the digital education initiative for primary teachers in Maharashtra. It started in Solapur district under TSTS MAHARASHTRA (Techno Savvy Teachers Secondary Maharashtra), on 2nd April 2020, by formulating a team of teachers for digital training of the primary teachers in Maharashtra. In total, 13 teachers took part in the group initiative.

The objective of this group was to impart technical and digital education to motivated, hardworking, and creative Primary teachers of the government, zilla parishad schools.

The uniform methodology adopted for delivering education through e-learning became a success in all aspects. The concepts covered in this technical education course are given below:

Table 1: Digital learning curriculum

Using of DISHA app (government app for online teaching)	Construction of assignments using Google form
Use of various computer programs	Downloading Videos
Construction of educational E-content	Use of Cairn master app for educational applications Constructing videos from PPT presentations
Video editing using mobile and computer applications	Use of various software to make a video
Sound recording	Sound modulation using various software

Creating animated videos	Creating you-tube channel
Updating personnel videos on you-tube	20 common educational applications and their use
Handling platforms like google meet, google classroom, Microsoft teams, Zoom	Choice of free Platform and their rules

This course trained more than 5000 primary school teachers from Solapur, Pune and Ratnagiri districts.

Implementation procedure:

1. Created district-wise WhatsApp group
2. Created detail time -table for content
3. Used Microsoft teams for this training
4. The timing was from 9 am to 12 noon on weekdays
5. Created a smart PDF of all training videos for teachers who faced network issues and could not attend the training in real time

लोकमत

राज्यातील स्थिती : लॉकडाऊनच्या काळात मिळविले डिजिटल कौशल्य

पाच हजार शिक्षक बनले तंत्रस्नेही

ऑनलाईन प्लॅटफॉर्मचा वापर

राज्यातील या शिक्षकांनी प्रशिक्षण दिले

लॉकडाऊनच्या संधीचा पुरेपूर वापर

जिल्हा आणि प्रशिक्षित शिक्षक

1700

1200

(प्रत्येकी ३००)

400

(प्रत्येकी २००)

100

1600

Image 1. Training of teacher programme in local newspaper and the team of teachers providing training on digital literacy
Source: Lokmat Newspaper 2020 and authors

Outcome:

This training reached to 5000 plus teachers in rural areas of Maharashtra and helped them to rapidly adapt to the suddenly changed the pattern of education due to the pandemic. Due to this digital literacy, teachers started applying this knowledge to create their personal videos. Teachers from rural areas started creating constructive evaluations. Some of them made their own mobile apps and also personal websites. Many of these digitally trained teachers made their own you-tube channels and also created animated videos of concepts. They then shared their content on the Mega Platform of Smart PDF. The universal rich content was arranged Standard wise and made available across Maharashtra, creating a mega information exchange e-platform of teachers, for teachers and absolutely free and transparent. This Platform of digital resources has been used as a powerful teaching tool by the rural teachers of

Maharashtra and has created a completely tech-friendly scenario among the students as well as teachers of rural areas.

3.2. Case Study 2: A report from Salpe village: Project: 'Shikshan Aamchya Dari' or doorstep education

This case study is based on the adaptation of e-learning in a different way by taking it to the doorsteps of the students of Salpe village in Ratnagiri district.

The Salpe village in Lanja region from Ratnagiri district is an interior rural region with ample natural resources, rich agriculture and diverse flora and fauna. Although urbanization has started happening, net connectivity is still poor in the region due to natural barriers like ghats and dense forests. The economy is mainly agriculture-based hence children help their parents in various household and agriculture-related work like feeding cattle, watering fields, working in housework etcetera. During the pandemic, when schools were closed, there was a huge problem of network, and online education was not feasible in this area. Mr. SP (Principal of Salpe Village Zilla parishad school), and his team started a project called *'doorstep education*' or '*Shikshan amchya dari' (Marathi).* The team of teachers communicated with parents and got ready with a plan for home visits. The timetable for home visits was prepared to mention activities like dictation, poetry recitation, story reading, and basic mathematics.

During the day when parents worked on the farm, students used to be alone at home. The books from the school library were made available to them by the school teachers at home. The initiative was named as *'APJ Abdul Kalam reading platform'*, under which the school library books were delivered to children at their homes. The students studying in college became volunteers to help with the reading and writing of these school children.

"Education is not a sole responsibility of a teacher but it's a collective responsibility of parents and society' this thought was actually implemented and hence educational environment was created in the region"- Mr.SP(Principal-Salpe village Zilla parishad school)

From July 2020, the following points were included during home visits to the students:

1. Homework
2. Self-study
3. Hobbies list
4. Studies update and evaluation

Teachers coming home and meeting and working with children created motivation and positivity among students and parents. Students showed active participation and gave day-to-day updates of their studies. *'Learning is the natural urge of every human being if it nurtures properly then children learn themselves'* this is the outcome and observation of this initiative (Mr. SP Principal, Zilla parishad Primary School (Salpe village), Lanja district, Ratnagiri).

Table 2: Details of the project in Salpe village

Total number of students participated in this project	24
Standards covered	3rd to 8th
Duration of the project	8 months
Population of villages	337
Number of male and female students	15 male and 9 female

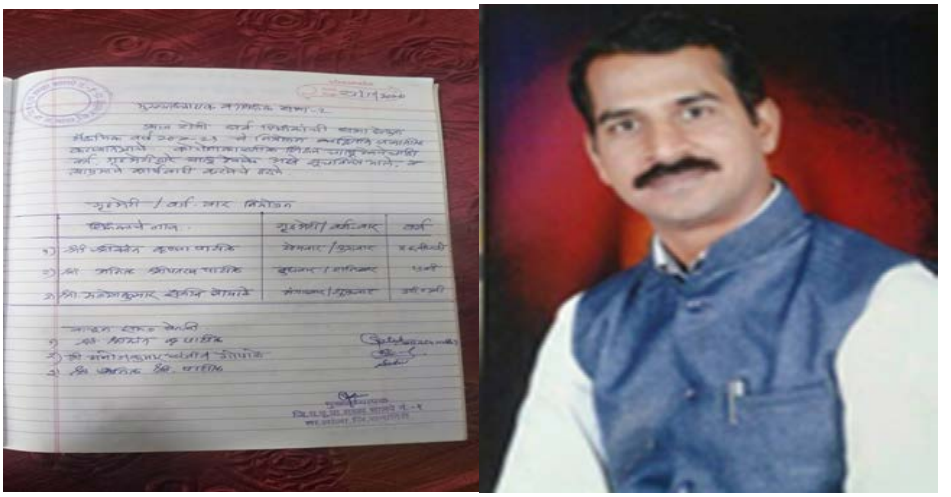

Image 2: Mobile reading platform 'books at our doorstep', doorstep learning and Records of home visits and Mr.SP (Principal of the school)
Source: Authors

Outcome:
This initiative allowed children to play freely, pursue their hobbies, play games, enjoy farm work in nature, and help parents with housework in their spare time. Children also enjoyed programs like 'gali gali sim sim' and 'teele milli' regarding educational content on Doordarshan.

This initiative created a bonding between students and teachers. Every stakeholder became a 'guru'. Empathy and emotional well-being were maintained. The lesson was learned by teachers to overcome diverse situations and find the solution with a constructive approach.

3.3 Case Study 3: Multi applications of digital education in Nande village, Mulshi Taluka, Pune district

Mrs. NH, teacher of Zilla parishad Prathamik school in Nande village of Pune district described the various technical applications and digital platforms which were used during the pandemic for the students of zilla parishad school in Nande village.
When the pandemic started, a survey done among the students revealed that only 50% of them had mobile phones. This created a limitation for the digital learning platform

to be used by the teacher. They came up with ideas to share the mobile phones with other students in pairs for learning during online classes. The rest who had absolutely no access to the mobile devices, 4-5 volunteers were requested to conduct mini-schools for a group of 4-5 students in their area. These volunteers were paid by the zilla parishad teachers, who paid them a part of their own salary every month. Another challenge faced by these teachers was the reluctance of students to install platforms like zoom and google meet. After a few days, they felt encouraged and started sharing their screens, were able to create links, and also made their own discussion groups for peer learning. To make the habit of reading, they started a project, where the teacher used to send an audio story every evening. The stories of authors like MP, RT, SM, SS were made available to students in the audio form. Also, there were stories written by one of the co-teacher of the school and FK. The students listened to these stories at bedtime with attention. Students from the English medium also loved these stories. They purchased these storybooks and started reading them. From this project, students developed the ability of active listening and active reading.

For children who needed help in reading, these teachers used an application like 'read along'. In this app, there is a facility to get a star for what you read. With the help of this system, students started to keep their reading records, which benefited them.

There were topic-wise videos on government apps like 'Diksha' and 'Digital Sakshar'. Students could watch these videos whenever they wished. Along with Google meet, assignments were designed using google forms. The government started a test series with automated replies. Children got the benefit of this project. MKCL (A government wing of digital education) provided their own assignments.

DETC (District Education and Training Centre) has implemented a project for guidance to parents called 'Palak Mitra' through which they explained the role of parents in the education of their child.

Through 'Palak Mitra' there were 6 guidance videos prepared and played through youtube for parents. In this way, the participation of parents was actively communicated to them. Many teachers started their own youtube channel. One of the

videos of Mrs. H (teacher and primary source of this information), showed 43,000 views. This is not a small number for a non-professional government teacher. Voluntary organizations like the Agasti foundation, organized workshops on topics like introduction to different foodstuff, match stick puzzles, and also Warli painting. Online games were also organized for children.

To encourage children to learn, virtual trophies were introduced as a token for their reward for doing homework, for good artwork, and to encourage their overall motivation.

The reward system proved to be successful for retaining their attendance and improving their overall performance.

Digital education about creating passwords was also organized. Also, awareness was created regarding fake messages and the information given to parents regarding how to lock the apps when they are not around to monitor their children.

Outcome:

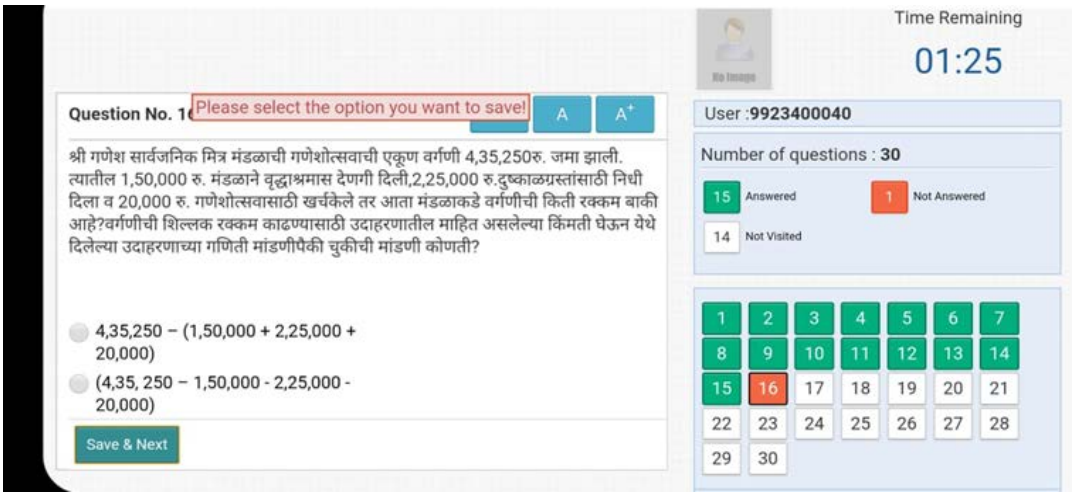

Image 3: Evaluation through an app

Source: Authors

Image 4: Digital trophy and creativity by students of Nande village

Sources: Authors

Image 5: Educational Programs on Doordarshan (The National channel of India)

Source: Primary Study

	Case 2 (Salpe village)	**Case 3 (Nande village)**
Area of study	Salpe village, Lanja Taluka, Ratnagiri district	Nande village, Mulshi Taluka, Pune district
Population	337	1600 approx.
Gross Enrolment Ratio in thousand	255 (Ratnagiri district)	345 (Pune district)

Gender Ratio	63:37	73:27
Types of technology used	No apps, as the students had no accessibility to digital devices and platforms	zoom, google meet, MKCL platform, youtube stories
Accessibility to digital devices and internet	No	initially 50% , now 90%
Teacher-Student Ratio	1:24	1:30
Apps and platforms used	None	Storytell, Diksha, MKCL app for evaluation

Results: Comparative analysis of the two villages

Table 3: Comparative analysis of two villages

Source: Authors

DISCUSSION

The comparative analysis done between the zilla parishad schools of two different districts of Maharashtra within homogenous variables shows the different degrees of adaptability of teachers and students of various regions based on their geographical location and accessibility to digital devices and internet access. Whereas, the zilla parishad school of Nande village in Pune district has been extremely successful in adapting and implementing e-learning through various digital platforms to its student population. The same has not been successful for the zilla parishad school of Salpe village in Ratnagiri. This happened because of the geographical limitations which create natural barriers to internet connectivity. The accessibility of digital devices like mobile phones and television sets have also been a major constraint in the dissemination of online education to the students of this region. The teachers of the Salpe village thereby, despite getting trained in the digital programs, could not use online teaching during the pandemic because of the lack of accessibility of digital devices and internet access to the students. They, therefore, modified the pattern of dissemination of education to 'doorstep education', which became a more effective and successful model of teaching than even during the normal times.

This study thereby tries to highlight the fact that e-learning cannot be uniformly implemented in all the regions of the state or country simultaneously. The success of online education through e-learning is based on the accessibility of digital resources, internet connectivity, and network status for the population of that region. There should be enough flexibility provided to the teachers of the zilla parishad schools of that area to cater to the needs of the students in the respective region. The one teacher education system model, which relates back to the indigenous method of teaching during the ancient times in India, seems to be still significantly successful in the remote parts of the country which has limited access to modern digital resources and network connectivity.

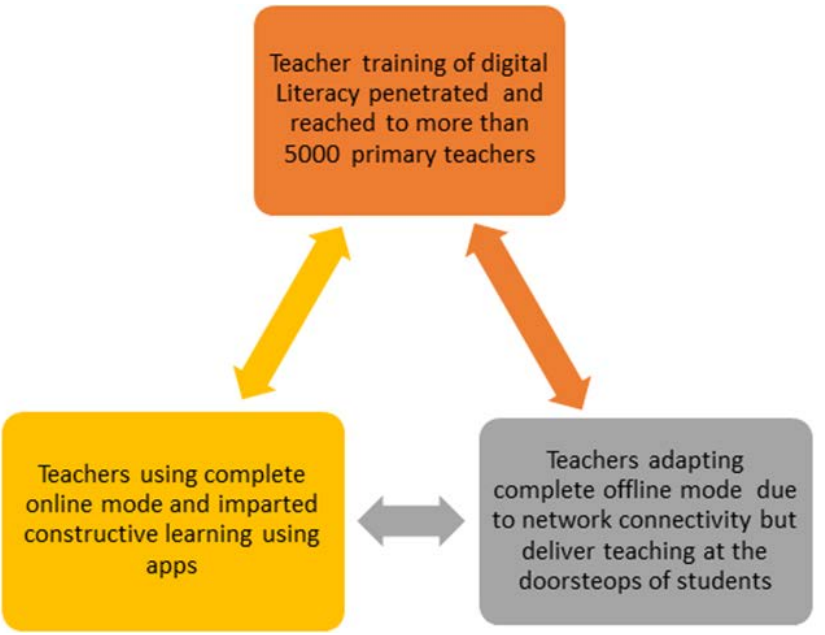

Figure 1: Model showing the linkage between case 1, case 2, and case 3
Source: Authors

CONCLUSION

India remains a predominantly agriculture-based economy, largely connected by towns and villages, where digital access for school education remains strictly limited. In such times there can be many noteworthy methods teachers may have used across the country. We have highlighted representative case studies that are specific to

region, geography, and availability of resources. Hence these case studies cannot be generalized to give a larger perspective of digital education. But it definitely highlights the willingness, ability, and adaptability of school teachers. It has shown the potential of rural teachers and given the opportunity, they can guide the important transition in education, happening in the near future.

The government should encourage ground reality surveys of innovative methods used by teachers in covid times and a platform should be created to compile all such techniques, which will act as an excellent resource for future education. The pandemic comes once in a century, but the work done by teachers in rural areas in these difficult times acts as a future reference guide to deal with such adversities. It can serve as a document of the historical record for future generations. Although digital learning has become 'the new normal and remains after the pandemic, the role of indigenous education is more highlighted in rural education, where accessibility and network remain a challenge. The schools in these case studies having a single teacher for all subjects showed the indigenous approach even in a digital way.

The case study of teacher training of digital literacy has created an environment of cooperation, collaboration, and skill-dominated progression. This case study can be a role model for other states in India as well as for other countries, where there is poor digital access to the majority population. This model can be useful, especially for the African countries and south-east Asian countries, like Bangladesh, Nepal, and Sri Lanka. The digital education of teachers facilitates quality digital learning for students. The future model of education is the blended model. To restructure and adapt to a blended model of education, such initiatives should be implemented with government funding to ensure the utmost quality of teacher training and better student output(India G. o., 2021).

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EVALUATING THE IMPACT OF TECHNOLOGICAL ADVANCEMENTS AND GOVERNMENT INITIATIVES ON CONSUMER EXPERIENCE IN INDIA'S RETAIL SECTOR: A LITERATURE REVIEW

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Abstract

This literature review examines the impact of technological advancements and government initiatives on consumer experience in India's retail sector. It highlights how technologies like AI, IoT, AR, VR, and big data analytics have transformed retail operations and enhanced customer engagement. The review also analyzes government initiatives such as Digital India, Startup India, and Make in India, which promote technology adoption and support retail sector growth. Despite significant

advancements, barriers like financial constraints, lack of skilled workforce, and data privacy concerns hinder technology adoption. The review identifies opportunities for market growth and competitive advantage, emphasizing the importance of continued technological investments and supportive policies to enhance consumer satisfaction and engagement in India's retail landscape.

Keywords: *Retail Technology, Consumer Experience, Government Initiatives, Digital Transformation*

INTRODUCTION

India's retail sector, one of the fastest-growing markets globally, has undergone profound changes over the past decade. These transformations are primarily driven by two significant forces rapid technological advancements and proactive government initiatives. The retail landscape in India encompasses a wide spectrum, from traditional brick-and-mortar stores to modern e-commerce platforms, catering to a diverse and vast consumer base. Technological innovations have revolutionized the way consumers interact with retail businesses. The advent of the internet and the proliferation of smartphones have given rise to e-commerce, making shopping more convenient and accessible (Sharma & Mehrotra, 2019). Technologies such as Artificial Intelligence (AI), Internet of Things (IoT), Virtual Reality (VR), Augmented Reality (AR), and big data analytics have further enriched the consumer experience by providing personalized, efficient, and immersive shopping environments (Batra, 2020).

Technology plays a crucial role in enhancing the consumer experience by transforming traditional shopping methods and introducing innovative solutions that cater to modern consumer needs. The integration of advanced technologies into the retail sector has led to several significant improvements personalization and customer engagement through AI and ML, convenience and accessibility via e-commerce platforms and digital payment systems, enhanced product visualization with AR and VR, operational efficiency from IoT and big data analytics, and real-time customer support powered by AI (Davenport et al., 2020; Siddiqui et al., 2020; Pantano et al., 2017; Zhong et al., 2017; Grewal et al., 2020). Simultaneously, the Indian government

has implemented various initiatives aimed at enhancing the digital infrastructure and fostering a favorable business environment. Campaigns like Digital India, Startup India, and Make in India, along with the introduction of Goods and Services Tax (GST), have played pivotal roles in streamlining the retail sector. These measures have not only facilitated the growth of e-commerce but also improved logistics, reduced costs, and increased the availability of locally manufactured products (Chakravarty et al., 2019; Singh & Singla, 2018). The objectives of this literature review are threefold:

- To investigate how AI, IoT, VR/AR, and big data analytics enhance consumer experience in India's retail sector.

- To examine the impact of Digital India, Startup India, and Make in India on promoting retail technology adoption.

- To explore barriers to technology adoption and identify opportunities for market growth and competitive advantage in the Indian retail sector.

This literature review aims to provide a comprehensive analysis of how these technological advancements and government initiatives have collectively impacted consumer experiences in India's retail sector. By examining existing research, this review seeks to highlight the benefits, challenges, and future directions for enhancing consumer satisfaction and engagement in the evolving retail landscape.

LITERATURE REVIEW

Technological Advancements in the Retail Sector

Technological advancements have played a pivotal role in transforming the retail sector, especially in a rapidly developing market like India. The integration of cutting-edge technologies such as e-commerce platforms, digital payment systems, artificial intelligence (AI), machine learning (ML), the Internet of Things (IoT), augmented reality (AR), and virtual reality (VR) has revolutionized the way retailers operate and how consumers shop(Kumar & Kashyap, 2018; Raghavan, 2020). These advancements have not only enhanced the convenience and efficiency of shopping but also significantly improved the overall consumer experience by offering personalized,

immersive, and seamless services. This section explores the various technological innovations that have reshaped the retail landscape in India, highlighting their impact and growth potential.

E-commerce

The rise of e-commerce platforms such as Flipkart, Amazon India, and Myntra has democratized access to a wide range of products and services, transcending geographical barriers. E-commerce in India has not only facilitated consumer access to global brands but has also provided a platform for local and regional sellers to reach a broader audience. According to a report by the Indian Brand Equity Foundation (IBEF), the e-commerce market in India was expected to grow to USD 200 billion by 2026, driven by increasing internet and smartphone penetration. Several studies have highlighted the impact of e-commerce on consumer experience in India. For instance, Kumar and Mukherjee (2020) noted that the convenience of online shopping, competitive pricing, and diverse product offerings have significantly enhanced consumer satisfaction. Additionally, personalized recommendations and targeted marketing enabled by AI algorithms have further improved the shopping experience by catering to individual consumer preferences.

The increasing penetration of smartphones and internet access has played a crucial role in the growth of e-commerce. As of 2020, India had over 700 million internet users, with the number projected to reach 974 million by 2025 (Statista, 2021). This surge in internet usage has been a critical factor in enabling the widespread adoption of online shopping. Furthermore, the convenience of doorstep delivery and the ability to compare prices across multiple platforms have also contributed to the growing popularity of e-commerce. Moreover, the COVID-19 pandemic accelerated the adoption of e-commerce as consumers preferred online shopping to avoid physical stores. A report by KPMG (2021) highlighted that the pandemic led to a 30% increase in online shopping frequency among Indian consumers, emphasizing the shift in consumer behavior towards digital platforms. This shift is expected to have a lasting impact on the retail landscape, further driving the growth of e-commerce.

Digital Payment Systems

Digital payment systems have played a pivotal role in the growth of e-commerce in India. The introduction of Unified Payments Interface (UPI) by the National Payments Corporation of India (NPCI) has revolutionized the way transactions are conducted, making them faster, more secure, and easily accessible. As of March 2022, UPI had processed over 5 billion transactions worth approximately INR 8.27 trillion, highlighting its widespread adoption (NPCI, 2022). The Digital India initiative, launched by the Government of India, has further accelerated the adoption of digital payments by promoting financial inclusion and digital literacy. The impact of digital payment systems on consumer experience is profound. According to Gupta and Arora (2021), the ease of making payments through mobile wallets, UPI, and other digital platforms has reduced transaction times and increased consumer trust in online shopping. The integration of secure payment gateways and the implementation of stringent security measures have also mitigated concerns regarding data privacy and fraud, thereby boosting consumer confidence.

The Internet of Things (IoT) represents a network of interconnected devices that communicate and exchange data, enhancing efficiency and enabling advanced applications across various sectors, including retail, healthcare, and manufacturing. IoT integrates physical objects into a digital network, enabling devices to collect and share data through sensors and connectivity. This technology has revolutionized industries by providing real-time insights, improving operational efficiency, and enhancing user experiences (Atzori et al., 2010; Gubbi et al., 2013). In the retail sector, IoT has enabled smart shelves, inventory management, and personalized customer experiences, allowing retailers to track products, monitor consumer behavior, and optimize supply chains (Lee & Lee, 2015; Perera et al., 2014). For instance, IoT-enabled smart shelves can detect when stock is low and automatically reorder products, ensuring that shelves are always stocked and reducing the likelihood of lost sales due to out-of-stock items. Additionally, IoT devices can collect data on consumer behavior, such as the time spent in different sections of a store, which can help retailers optimize store layouts and marketing strategies.

Despite its potential, IoT faces challenges such as security concerns, data privacy issues, and the need for standardization (Miorandi et al., 2012; Ashton, 2009). Security

is a major concern because IoT devices can be vulnerable to hacking, which can lead to unauthorized access to sensitive data. Data privacy is also a significant issue, as the vast amount of data collected by IoT devices can include personal information that needs to be protected. Furthermore, the lack of standardization in IoT technology can lead to compatibility issues between devices from different manufacturers. Addressing these challenges is crucial for the widespread adoption of IoT technology. However, advancements in artificial intelligence (AI) and machine learning (ML) offer opportunities for more sophisticated IoT applications (Borgia, 2014; Whitmore et al., 2015). For example, AI and ML can be used to analyze the vast amount of data collected by IoT devices to identify patterns and make predictions, such as predicting equipment failures before they occur, which can significantly improve maintenance processes.

Augmented Reality (AR) and Virtual Reality (VR)

Augmented Reality (AR) and Virtual Reality (VR) technologies have significantly impacted various industries by enhancing user experiences and providing immersive environments. AR overlays digital information onto the real world, while VR creates entirely immersive virtual environments. Both technologies have applications in gaming, education, healthcare, and retail (Azuma, 1997; Cawood & Fiala, 2007). In the retail sector, AR and VR enhance customer experiences by enabling virtual try-ons, interactive product displays, and immersive shopping environments, helping retailers engage customers and provide personalized experiences (Craig, 2013; Carmigniani et al., 2011). For example, AR can allow customers to visualize how furniture would look in their homes before making a purchase, while VR can create virtual showrooms where customers can explore products in a highly interactive manner. Despite these benefits, challenges such as high development costs, technological limitations, and user acceptance persist (Milgram & Kishino, 1994; Steuer, 1992). Development costs for AR and VR can be prohibitive, limiting their accessibility to larger companies with significant resources. Technological limitations, such as the need for high-performance hardware, can also restrict widespread adoption. However, advancements in hardware and software are driving broader adoption and more sophisticated applications (Slater & Wilbur, 1997; Billinghurst & Kato, 2002). For instance, improvements in VR headsets are making them more

comfortable and affordable, while AR technology is becoming more integrated into everyday devices like smartphones and tablets, increasing its accessibility and potential for widespread use.

Big Data Analytics

Big Data Analytics involves the examination of large and varied data sets to uncover hidden patterns, unknown correlations, market trends, customer preferences, and other useful business information. Big Data Analytics leverages advanced analytical techniques to handle vast amounts of data. This technology is crucial for decision-making processes across industries, including finance, healthcare, and retail (Manyika et al., 2011; Chen et al., 2012). In the retail sector, Big Data Analytics helps in understanding consumer behavior, optimizing pricing strategies, and improving supply chain efficiency. Retailers can use predictive analytics to anticipate market trends and customer needs (Davenport & Dyché, 2013; Gandomi & Haider, 2015). For instance, by analyzing customer purchase histories and preferences, retailers can tailor marketing campaigns to specific demographics, thereby increasing engagement and sales. Challenges include data privacy concerns, the need for skilled professionals, and the integration of big data solutions into existing systems (Wamba et al., 2015; Kitchin, 2014). Data privacy is a significant concern, as the massive volumes of data collected often contain sensitive information. Ensuring this data is protected and used ethically is paramount. Moreover, the complexity of Big Data Analytics requires skilled professionals who can interpret and act on the data insights. Integration of Big Data Analytics into existing IT infrastructure can also be challenging, often requiring significant investment in technology and training. However, the potential benefits in terms of insights and competitive advantage are substantial (Russom, 2011; Laney, 2001). Companies that successfully implement Big Data Analytics can gain a significant edge over competitors by making more informed decisions and optimizing operations based on data-driven insights.

Government Initiatives in India- Digital India Campaign

The Digital India campaign, launched in 2015, aims to transform India into a digitally empowered society and knowledge economy. This initiative focuses on providing digital infrastructure as a utility to every citizen, governance and services on demand,

and digital literacy (Ministry of Electronics and Information Technology, 2021). Key projects under this initiative include BharatNet, which aims to connect rural areas with high-speed internet, and DigiLocker, which provides a secure cloud-based platform for storing and sharing documents (Dhas & Misra, 2015; Kumar, 2016). These projects have significantly improved access to digital services and information, thereby enhancing the quality of life for many Indians. The impact of the Digital India campaign has been substantial in various sectors. For instance, in education, the initiative has enabled e-learning platforms that provide quality education to students in remote areas (Pradhan & Jena, 2016). In healthcare, telemedicine services have become more accessible, improving healthcare delivery in rural regions (Patil et al., 2016). Despite these successes, challenges such as digital divide, cybersecurity, and infrastructure development need to be addressed for broader and more inclusive digital adoption (Bhatnagar, 2017; Sharma, 2018).

Startup India Initiative

Launched in 2016, the Startup India initiative aims to build a strong ecosystem that is conducive to the growth of startup businesses, driving sustainable economic growth and generating large-scale employment opportunities (Department for Promotion of Industry and Internal Trade, 2021). This initiative provides various benefits, including tax exemptions, easier compliance, and funding support through the Fund of Funds for Startups (FFS) (Aggarwal & Siddiqui, 2017; Bhasin & Bhasin, 2019). The initiative has fostered a culture of innovation and entrepreneurship in India. For example, programs such as the Atal Innovation Mission and Tinkering Labs encourage young minds to engage in creative problem-solving and innovation (Gupta & Rathore, 2018). Additionally, the Startup India initiative has helped streamline processes for setting up businesses, making it easier for entrepreneurs to navigate regulatory requirements (Panda, 2020; Kaushik & Raman, 2018). However, the initiative also faces challenges such as inadequate funding, lack of infrastructure, and the need for more effective mentorship programs (Rajasekaran, 2019; Chatterjee, 2020). Addressing these issues is crucial for sustaining the momentum of the startup ecosystem in India.

Make in India Initiative

The Make in India initiative, launched in 2014, aims to transform India into a global manufacturing hub by encouraging both multinational and domestic companies to manufacture their products within the country (Ministry of Commerce and Industry, 2021). The initiative focuses on 25 sectors, including automobiles, textiles, electronics, and pharmaceuticals, and aims to increase the manufacturing sector's contribution to GDP to 25% by 2025 (Ghosh, 2015; Mehta, 2016). This initiative has led to significant improvements in the ease of doing business in India. For instance, policy reforms such as simplifying licensing processes, reducing regulatory burdens, and improving infrastructure have attracted foreign direct investment (FDI) and boosted industrial growth (Mukherjee, 2016; Kumar & Dhir, 2017). The introduction of initiatives like the National Investment and Infrastructure Fund (NIIF) has also provided the necessary financial support for large-scale infrastructure projects (Nayak, 2018; Sengupta, 2019). Despite these achievements, the Make in India initiative faces challenges such as skill gaps in the workforce, regulatory hurdles, and the need for continuous improvement in infrastructure (Bhattacharya & Patel, 2019; Basu, 2020). Addressing these challenges is essential for realizing the full potential of the initiative.

Barriers to technology adoption

Adopting new technologies can significantly enhance productivity, efficiency, and innovation across various sectors; however, several barriers can impede the successful adoption and integration of these technologies. Financial constraints are a primary barrier, as high initial costs for purchasing and implementing new technologies can deter organizations, especially small and medium enterprises (SMEs), from adopting them, with ongoing maintenance and upgrades adding to the financial burden (Rogers, 2003; Buehrer et al., 2005). Another significant barrier is the lack of a skilled workforce to operate and manage new technologies, as many organizations struggle to find employees with the necessary technical skills and knowledge (Pfeiffer, 2018; Autor, 2019). Resistance to change within organizations can also impede technology adoption, with employees potentially reluctant to adopt new technologies due to fear of job loss, disruption of established workflows, or lack of understanding of the benefits (Venkatesh et al., 2003; Kim & Kankanhalli, 2009). Inadequate infrastructure, particularly in developing regions, poses another major obstacle, as reliable internet

connectivity, stable power supply, and access to necessary hardware and software are critical for implementing new technologies (Ndung'u & Signé, 2020; van Dijk, 2006). Data privacy and security concerns also pose significant barriers, with organizations hesitant to adopt new technologies due to the risk of data breaches, cyber-attacks, and the potential loss of sensitive information (Cavoukian, 2009; Kshetri, 2010). Additionally, regulatory and compliance issues can hinder technology adoption, as organizations must navigate complex regulatory landscapes and ensure compliance with various standards and laws, which can be time-consuming and costly (Bardach & Kagan, 2002; Grimes et al., 2010). Compatibility and integration challenges with existing systems further complicate technology adoption, with organizations often facing difficulties integrating new technologies with their legacy systems, leading to disruptions and inefficiencies (Gallivan, 2001). Cultural barriers within organizations, such as differences in organizational culture, values, and practices, can also create resistance and hinder the effective implementation of new technologies (Jasperson et al., 2005). A lack of awareness and understanding of new technologies and their potential benefits can prevent organizations from adopting them, highlighting the need for education and training programs to bridge this gap (Venkatesh et al., 2012). Finally, limited access to capital can restrict technology adoption, particularly for startups and SMEs, as these organizations struggle to invest in new technologies and drive innovation without adequate funding (Berger & Udell, 1998; Carpenter & Petersen, 2002).

Opportunities for Market Growth and Competitive Advantage

Market growth and competitive advantage are critical drivers for business success in today's dynamic and competitive environment. One significant opportunity for market growth lies in the adoption of innovative technologies. Companies that invest in emerging technologies such as artificial intelligence (AI), machine learning (ML), and the Internet of Things (IoT) can streamline operations, enhance customer experiences, and develop new products and services, thus gaining a competitive edge (Porter & Heppelmann, 2014; Bughin et al., 2018). For instance, AI and ML can help businesses analyze vast amounts of data to identify market trends and consumer preferences, enabling more targeted marketing strategies and personalized customer interactions (Davenport et al., 2020). Global expansion is another crucial opportunity for market

growth. By entering new geographical markets, companies can diversify their revenue streams and reduce dependency on a single market (Johanson & Vahlne, 2009; Verbeke & Asmussen, 2016). The rise of e-commerce and digital platforms has made it easier for businesses to reach international customers, thus opening up new growth avenues (Levitt, 1983). Additionally, strategic alliances and partnerships can provide access to new markets, technologies, and competencies, further enhancing competitive advantage (Dyer & Singh, 1998; Hitt et al., 2000). Sustainability and corporate social responsibility (CSR) initiatives also present opportunities for market growth and competitive differentiation. Companies that integrate sustainable practices into their operations can attract environmentally conscious consumers and differentiate themselves from competitors (Porter & Kramer, 2006). Moreover, CSR activities can enhance brand reputation and loyalty, leading to increased customer retention and market share (Carroll & Shabana, 2010).

Innovation and continuous improvement are essential for maintaining competitive advantage. Companies that foster a culture of innovation can continuously develop new products, services, and processes, keeping them ahead of competitors (Tidd & Bessant, 2018; Christensen, 1997). Investing in research and development (R&D) and encouraging creativity and experimentation within the organization can lead to breakthrough innovations that drive market growth (Schilling, 2017). In conclusion, adopting innovative technologies, pursuing global expansion, forming strategic alliances, embracing sustainability, and fostering a culture of innovation are critical strategies for achieving market growth and competitive advantage. By leveraging these opportunities, businesses can enhance their market position and ensure long-term success in a rapidly evolving marketplace.

RESEARCH METHODOLOGY

This literature review explores the impact of technological advancements and government initiatives on consumer experience in India's retail sector. The study uses a systematic approach to gather, analyze, and synthesize secondary data from various credible sources, including peer-reviewed journal articles, industry reports, government publications, and databases like Statista, Indian Brand Equity Foundation (IBEF), and Analytics India Magazine.

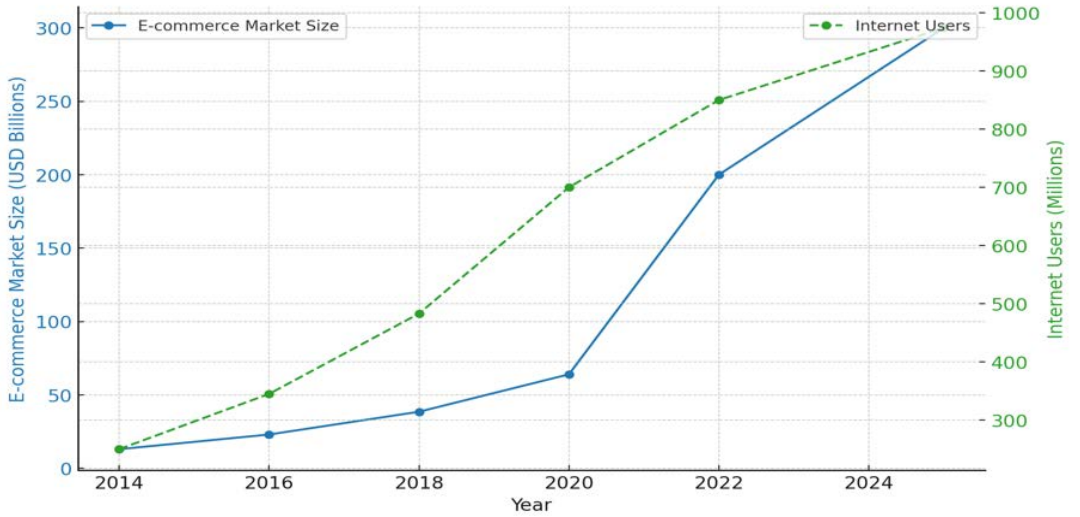
The collected data was analyzed thematically to identify key themes and patterns related to technological advancements, government initiatives, barriers to technology adoption, and opportunities for market growth and competitive advantage. Comparisons were made between different technologies and their specific impacts on consumer experience and operational efficiencies in the retail sector. Trends in market growth, adoption rates, and the effectiveness of government initiatives were analyzed to provide a comprehensive understanding of the evolving retail landscape in India.

To ensure accuracy and reliability, data from multiple sources was cross-referenced, and contradictory findings were critically evaluated to determine the most credible sources. Statistical data from sources like IBEF, Statista, and Analytics India Magazine were used to illustrate trends and patterns in IoT, AR/VR, and big data analytics adoption. This methodology ensures a comprehensive and accurate assessment of the impact of technological advancements and government initiatives on consumer experience in India's retail sector.

ANALYSIS AND FINDINGS

Technological Advancements in the Retail Sector

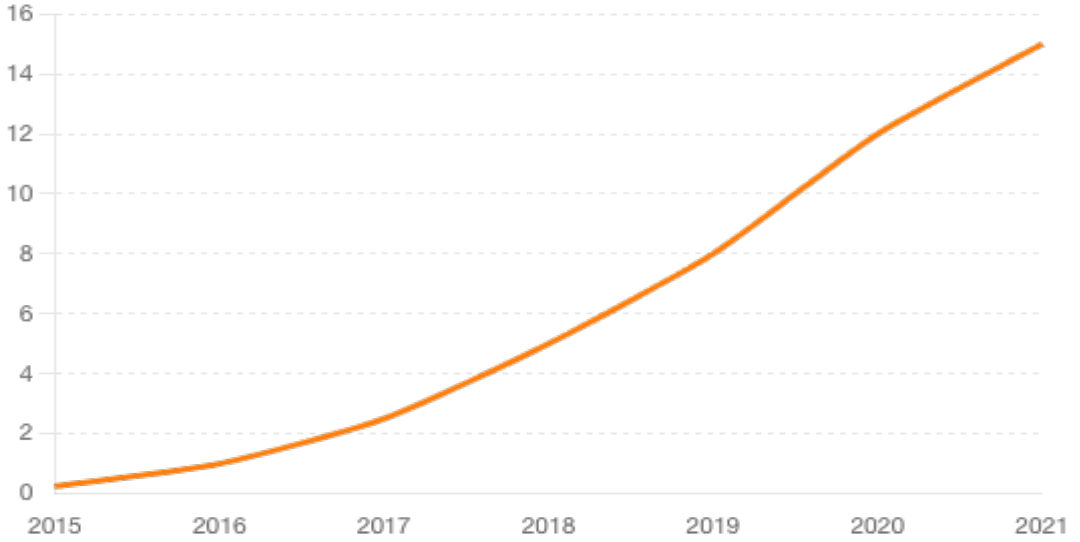
Growth of the e-commerce market size and the number of internet users in India (Graph 1)



Sources (Statista, 2021; KPMG, 2021; Reserve Bank of India, 2020)

The graph 1. illustrates the growth of the e-commerce market size and the number of internet users in India from 2014 to 2025. The e-commerce market in India has shown a significant upward trend, increasing from USD 13 billion in 2014 to an expected USD 200 billion by 2022, and is projected to reach USD 300 billion by 2025. This growth has been driven by various factors, including increased internet penetration, smartphone usage, and the convenience of online shopping. Simultaneously, the number of internet users in India has grown substantially from 250 million in 2014 to 700 million in 2020, with a projection of reaching 974 million by 2025. This rapid increase in internet users has facilitated the expansion of the e-commerce market, as more consumers have access to online platforms. The correlation between the growth of internet users and the expansion of the e-commerce market highlights the importance of digital infrastructure in driving the retail sector's growth in India.

Digital Payment Systems (Graph 2)



Source (Statista, 2021; PwC India, 2020)

The graph 2. illustrates the adoption of mobile payments in India from 2015 to 2021. Mobile payment transactions have grown exponentially from 0.25 billion in 2015 to 15 billion in 2021, indicating an increasing preference for digital payment methods among Indian consumers. The annual increase in mobile payment transactions highlights the accelerating adoption rate, with notable spikes in growth each year. This

trend can be attributed to the introduction of user-friendly mobile payment platforms such as UPI and various mobile wallets, which have significantly contributed to this growth. The rapid adoption of mobile payments is a critical factor driving the transformation of the retail sector in India, facilitating seamless and secure transactions for consumers. Internet of Things (IoT)

Table 1: Internet of Things (IoT) in India

Year	**Number of IoT Devices (Millions)**	**Market Size (USD Billion)**	**Key Applications**
2015	60	5.6	Smart Cities, Industrial IoT
2016	75	6.9	Healthcare, Smart Homes
2017	95	8.5	Agriculture, Transport
2018	120	10.4	Manufacturing, Energy Management
2019	150	12.7	Retail, Connected Vehicles
2020	200	15.9	Healthcare, Industrial Automation
2021	250	20.6	Smart Cities, Consumer IoT

*Source **(Ministry of Electronics and Information Technology** 2021**)***

The table1. shows the growth of IoT devices and market size in India from 2015 to 2021. The number of IoT devices in India has increased significantly from 60 million in 2015 to 250 million in 2021, indicating the expanding adoption of IoT technology across various sectors. Concurrently, the IoT market size in India has seen substantial growth, increasing from USD 5.6 billion in 2015 to USD 20.6 billion in 2021. Initially, IoT applications were primarily focused on smart cities and industrial IoT. Over time, the scope of IoT applications has diversified to include healthcare, smart homes, agriculture, transport, manufacturing, energy management, retail, and connected vehicles. This diversification indicates the broadening impact and potential of IoT technology in enhancing various industries and improving operational efficiencies.

Table 2: Augmented Reality (AR) and Virtual Reality (VR) in India

Year	**Market Size (USD Million)**	**Growth Rate (%)**	**Key Applications**
2015	50	-	Gaming, Education
2016	75	50	Retail, Real Estate
2017	120	60	Healthcare, Marketing
2018	180	50	Tourism, Automotive
2019	270	50	Training, E-commerce
2020	400	48	Virtual Tours, Remote Assistance
2021	600	50	Education, Simulation Training

Source (***TechSci Research***. 2021)

This table 3. highlights the market size and growth rate of AR and VR technologies in India from 2015 to 2021. The market for AR and VR in India has grown significantly, from USD 50 million in 2015 to USD 600 million in 2021, indicating robust adoption and investment in these technologies. The growth rate has been substantial, often exceeding 50% year-on-year, reflecting the increasing interest and application of AR and VR technologies in various sectors. Initially, AR and VR applications were focused on gaming and education, but over time, their use has expanded to include retail, real estate, healthcare, marketing, tourism, automotive, training, e-commerce, virtual tours, and remote assistance. By 2021, education and simulation training have become prominent areas of application, showcasing the versatile potential of AR and VR technologies in transforming various industries.

Table 3: Big Data Analytics in India

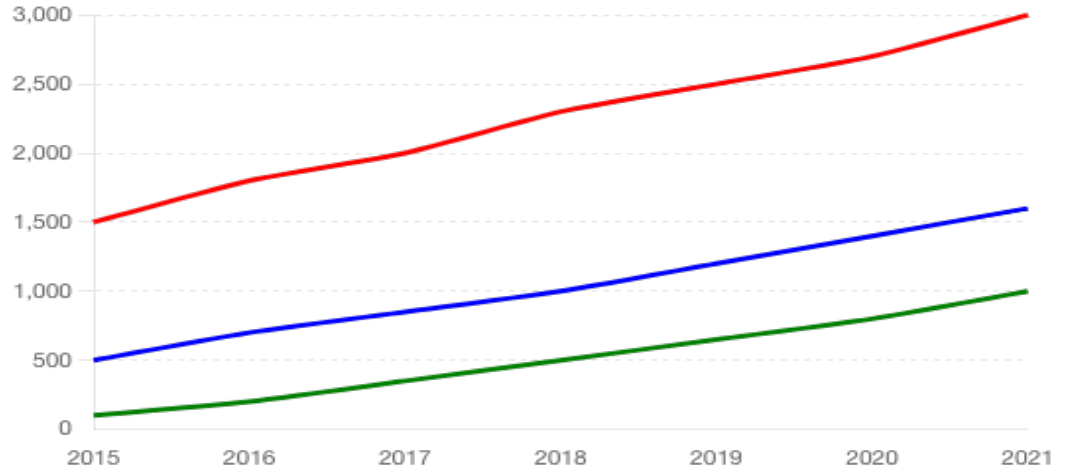
Year	**Market Size (USD Billion)**	**Growth Rate (%)**	**Key Applications**
2015	0.5	-	Banking, Telecom
2016	0.8	60	Retail, Healthcare
2017	1.2	50	E-commerce, Manufacturing

2018	1.8	50	Government, Insurance
2019	2.6	44	Finance, Education
2020	3.8	46	Transportation, Energy
2021	5.2	37	Agriculture, Media & Entertainment

Source ***(Analytics India Magazine*** *2021)*

This table 4. presents the market size and growth rate of Big Data Analytics in India from 2015 to 2021. The market size for Big Data Analytics has grown from USD 0.5 billion in 2015 to USD 5.2 billion in 2021, highlighting the growing importance of data-driven decision-making across various industries. The growth rate has been high, particularly in the early years, with growth rates of 50-60% in the initial years and a slight decrease to 37% by 2021, reflecting the maturation of the market. The applications of Big Data Analytics have become more widespread, starting with banking and telecom and expanding to include retail, healthcare, e-commerce, manufacturing, government, insurance, finance, education, transportation, energy, agriculture, and media & entertainment. This broad range of applications demonstrates the versatile impact of Big Data Analytics across different sectors, emphasizing its critical role in driving efficiency and innovation.

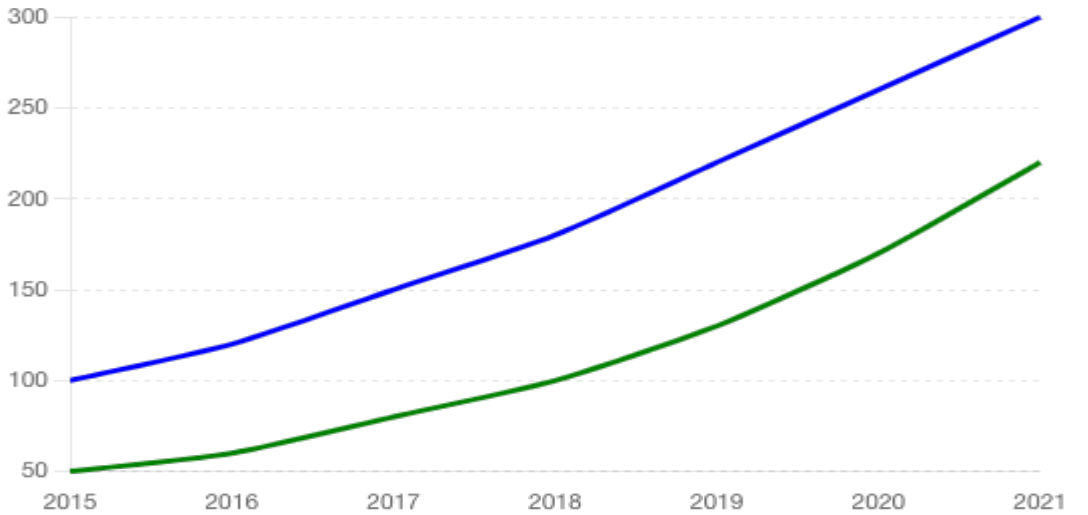
Government Initiatives in India- Digital India Campaign (Graph 3)



Source (Ministry of Electronics and Information Technology, 2021; Department for Promotion of Industry and Internal Trade, 2021; Ministry of Commerce and Industry, 2021)

The graph 3. illustrates the funding allocations for Digital India, Startup India, and Make in India initiatives from 2015 to 2021, highlighting a consistent upward trend in investments across all three programs. Digital India funding rose from INR 500 crores in 2015 to INR 1600 crores in 2021, reflecting the government's commitment to enhancing digital infrastructure and services. Startup India's funding increased from INR 100 crores to INR 1000 crores, underscoring efforts to foster a robust startup ecosystem and drive innovation. Make in India received the highest funding, starting at INR 1500 crores and reaching INR 3000 crores, emphasizing the strategic importance of transforming India into a global manufacturing hub. These rising investments across the initiatives demonstrate the government's dedication to driving economic growth and development through improvements in digital infrastructure, entrepreneurship, and manufacturing capabilities.

Opportunities for Market Growth and Competitive Advantage (Graph 4.)



Sources: Porter & Heppelmann (2014), Bughin et al. (2018), Davenport et al. (2020), Tidd & Bessant (2018).

The graph 4. illustrates the opportunities for market growth and competitive advantage in India from 2015 to 2021. The blue line represents the market growth, measured in billion USD, while the green dashed line represents the competitive advantage index.
The market size in India has shown a consistent upward trend from 2015 to 2021, starting at approximately USD 100 billion in 2015 and increasing to USD 300 billion by 2021. This growth reflects the increasing adoption of innovative technologies, global expansion, and strategic partnerships that have driven business success and expanded market opportunities. Concurrently, the competitive advantage index has steadily increased over the same period, starting at a value of 50 in 2015 and growing to 220 by 2021. This increase in competitive advantage can be attributed to companies adopting advanced technologies, implementing sustainability practices, and fostering a culture of continuous innovation and improvement. Overall, the graph highlights the significant opportunities for market growth and competitive advantage in India, driven by strategic investments in technology, global market expansion, and sustainable business practices. These factors have collectively contributed to the robust economic development and competitive positioning of businesses in India.

CONCLUSION AND DISCUSSION

The Indian retail sector has undergone a significant transformation over the past decade, driven primarily by rapid technological advancements and proactive government initiatives. The integration of technologies such as Artificial Intelligence (AI), the Internet of Things (IoT), Augmented Reality (AR), Virtual Reality (VR), and big data analytics has revolutionized the way retailers operate and interact with consumers. These advancements have not only enhanced the convenience and efficiency of shopping but also significantly improved the overall consumer experience by offering personalized, immersive, and seamless services.

Technological Advancements

The rise of e-commerce platforms, supported by increased internet penetration and smartphone usage, has democratized access to a wide range of products and services. E-commerce has provided a platform for both global brands and local sellers to reach a broader audience, contributing to the growth of the retail sector. The convenience of online shopping, competitive pricing, and diverse product offerings have significantly

enhanced consumer satisfaction. Digital payment systems, particularly the Unified Payments Interface (UPI), have further facilitated the growth of e-commerce by making transactions faster, more secure, and easily accessible. The widespread adoption of mobile payments has been a critical factor driving the transformation of the retail sector in India, facilitating seamless and secure transactions for consumers.

IoT has played a crucial role in enhancing operational efficiency and improving consumer experiences. IoT-enabled devices have revolutionized inventory management, personalized customer experiences, and supply chain optimization. However, challenges such as security concerns, data privacy issues, and the need for standardization must be addressed to ensure the widespread adoption of IoT technology. Similarly, AR and VR technologies have significantly impacted various industries by providing immersive and interactive experiences. Despite challenges such as high development costs and technological limitations, advancements in hardware and software are driving broader adoption and more sophisticated applications of AR and VR technologies.

Big Data Analytics has emerged as a crucial tool for decision-making processes across industries. In the retail sector, big data analytics helps in understanding consumer behavior, optimizing pricing strategies, and improving supply chain efficiency. The integration of big data solutions into existing systems can be challenging, but the potential benefits in terms of insights and competitive advantage are substantial.

Government Initiatives

Proactive government initiatives such as Digital India, Startup India, and Make in India have played pivotal roles in streamlining the retail sector. The Digital India campaign has significantly improved access to digital services and information, enhancing the quality of life for many Indians. The Startup India initiative has fostered a culture of innovation and entrepreneurship, providing various benefits to startups, including tax exemptions, easier compliance, and funding support. The Make in India initiative has transformed India into a global manufacturing hub by encouraging both multinational and domestic companies to manufacture their products within the country. These initiatives have collectively contributed to the growth of the retail

sector by enhancing digital infrastructure, fostering innovation, and improving the ease of doing business in India.

Opportunities and Challenges

Despite the significant advancements and opportunities, several barriers impede the successful adoption and integration of new technologies. Financial constraints, lack of a skilled workforce, resistance to change, inadequate infrastructure, data privacy and security concerns, regulatory and compliance issues, compatibility and integration challenges, cultural barriers, and limited access to capital are some of the major obstacles. Addressing these challenges is crucial for sustaining the momentum of technological adoption and maximizing the benefits of these advancements.

FUTURE DIRECTIONS

The future of the Indian retail sector looks promising with continued investments in innovative technologies and supportive government initiatives. Companies that adopt advanced technologies, pursue global expansion, form strategic alliances, embrace sustainability, and foster a culture of continuous innovation will be well-positioned to achieve market growth and competitive advantage. Further research is needed to explore the long-term impacts of these technologies and initiatives on consumer experiences and the overall growth of the retail sector. Policymakers, business leaders, and researchers must work together to address the existing challenges and harness the full potential of technological advancements to drive sustainable economic growth and development in India.

In conclusion, the collective impact of technological advancements and government initiatives has significantly enhanced consumer experiences in India's retail sector, driving growth, efficiency, and innovation. By leveraging these opportunities and addressing the challenges, the Indian retail sector can continue to thrive in the evolving global market landscape.

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IMPACT OF COVID-19 PANDEMIC ON THE TRADE BETWEEN INDIA AND ARGENTINA

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Abstract:
The spread of coronavirus has damaged the global economy very severely. Covid-19 pandemic has pushed the world into the most acute trade contraction. Trade of goods and services in India suffered a lot due to Covid-19 pandemic. It has adversely affected India's international trade. This exceptional crisis has resulted a contraction in the trade volume of commodities. The pandemic shocked India and Argentina into the utmost severe trade shrinkage since the global financial crisis. Covid-19 pandemic has caused a sharp drop in international trade. India unified with the global economy in an unparalleled reduction in trade in 2020-21, pulled down by the Covid-19 pandemic. It has badly affected India's trade foundations. The entire world is facing the biggest crisis and both India and Argentina have been affected by the devastating Coronavirus disease. The commodity exports from Argentina had fallen by 2.4 percent in 2019. In view of the bilateral trade between India and Argentina, this study examines the impact of Covid-19 pandemic on the exports, imports and terms of trade between India and Argentina. To analyse the trade pattern from 2001 to 2020, data is obtained from UNCOMTRADE database and for the terms of trade analysis, data is derived from UNCTAD. Net Barter Terms of Trade (NBTOT), Gross Barter Terms of Trade (GBTOT) and Income Terms of Trade (ITOT) are used to analyse the terms of trade of India and Argentina during the Covid -19 pandemic. This study highlights a severe change in India's trade pattern with Argentina and also there are fluctuations in terms of trade due to the outbreak of Covid-19 at the world level. India's exports and

imports to Argentina declined resulting a sharp deterioration in terms of trade after the spread of Covid-19 pandemic. Policymakers should try to find out a comprehensive economic strategy to combat with this unparalleled scenario in the post covid-19 pandemic world. Systematic opening of the economies and regulating to "New Normal" is the need of the time.

Keywords: *India and Argentina trade, Covid-19 pandemic, Trade Pattern, Terms of Trade*

INTRODUCTION

The onset of the novel Corona virus outbreak in Wuhan, China has sent the world winding at its feet. The eruption of Covid-19 brought social and economic life to a halt. The International Monetary Fund (IMF) pointed out that the world economy is likely to contract by 3% due to lockdown which was declared by many countries. The main driver of the current crisis was the reduction in export volumes. World Trade Organisation (WTO) also estimated that the world trade was expected to deteriorate due to Coronavirus pandemic. Merchandise exports of India decreased by 34.6% to US$21.41billion with a few days' lockdown in March 2020. Further the lockdown resulted a major fall in exports from India. The merchandise exports of India reached an all-time high of US $ 330 billion in 2018 - 2019 which fell down to US $ 314 billion in 2019 -2020.Similar trend was noted in the case of imports by India. The imports reached a height of US $ 514 billion in 2018 -19 and then decreased to a higher rate of -9.3 % than exports in 2019 -20 due to global slowdown brought upon by the covid-19 crisis and the subsequent disruptions in supply chain and demand. There is a huge impact of covid-19 on India's trade. The estimated fall in India's exports was 13.7% to 20.8% in 2021 over 2020 under covid-19 scenario. The recent monthly trade data for India discloses that the overall exports in January 2020 compared to January 2019 was down by 1.9%.

Brief Profile of India and Argentina

A brief profile of macroeconomic variables is studied for India and Argentina. It will highlight the basic indicators of these economies. Table 1 shows that India is stronger than Argentina in terms of total global trade as the total world trade of India was US$

978.13 billion while that of Argentina was US $116.32 billion in the year 2020. The merchandise trade data shows that US and China are the common exporting partner of both India and Argentina. But both countries are facing trade deficit in the world market. In Argentina 61.1% of the total GDP is contributed by the service sector and exports of Argentina are diversified. India is an agricultural economy and the share of agriculture in gross domestic product is marked at 15.5% while in Argentina the share of agriculture in GDP is 10.8%. Share of industry in GDP is 23% in India while in Argentina the share of industry in GDP is 28.1%.

Table 1: India and Argentina: A Comparison of Macro Economic Variables

India -- Argentina: Comparison Sheet				
Serial No.		**Unit**	**India (2021)**	**Argentina (2021)**
1	**Capital**		New Delhi	Buenos Aires
2	**Area**	sq. Km	3,287,263	2780400
3	**Population**		1,339,330,514 (July, 2021 est.)	45,864,941 (July 2021 est.)
4	**GDP (Real Growth Rate)**	Percent	4.86(2019est.)	-2.03% (2019 est.)
5	**Agriculture in GDP**	Percent	15.5(2016est.)	10.8% (2017 est.)
6	**Industry in GDP**	Percent	23(2016est.)	28.1% (2017 est.)
7	**Services in GDP**	Percent	61.5(2016est.)	61.1% (2017 est.)
8	**Total**	Percent	100	100

Merchandise Trade Data				
9	**Total Export to the World (Data is in current year dollars)**	$ Billion	484.95(2020est.)	64.18 (2020est.)
10	**Total Import from the World (Data is in current year dollars)**	$ Billion	493.18(2020est.)	52.14(2020est.)
11	**Total Global Trade**	$ Billion	978.13	116.32
12	**Trade Balance**	$ Billion	-8.23	12.04
13	**Top Exporting Countries**	Percent	United States (15.6), United Arab Emirates (10.2), Hong Kong (4.9)	United States (75) and China (11)
14	**Top Importing Countries**	Percent	China (15), United States (7), United Arab Emirates (6), Saudi Arabia (5)	United States (14), China (18)
15	**External Debt**	$ Billion	555.388(2019est.)	278.524 billion (2019 est.)

Source: CIA World Fact book

Argentina is the second major country in Latin America with an area of 2780,400 square kilometres. Its capital is Buenos Aires and the currency is Argentine Peso. It is a prominent nation whose economy is the third largest in Latin America. It has a population of 45,864,941 in July 2021. Its economy vigorously depends on agrarian exports and different businesses. It has countless natural resources like oil, lead, iron metal, zinc and uranium. India and Argentina relations are cordial and involve political, economic and technological support. The exports of India to Argentina include organic chemicals, vehicles, auto parts, machinery and garments. The major items of imports from Argentina are soybean oil, copper, sunflower oil, leather, animal fats, ores, slag and ash, rawhides excluding furskins, wool and inorganic chemicals etc.

Argentina has vast export based agricultural sector and its industrial base is developed. It is the main agricultural producer of the world for the products like wheat, honey, maize, sorghum, sunflower seeds, wheat and squash. Services is the largest sector in its economy which contributes around 61.1% of GDP. The main sectors by production in terms of value are food and beverage processing, automotive and auto parts, refining products, chemicals, pharmaceuticals, steel, aluminium, electronic and household appliances.

Objectives of the Study

The present research work is conducted with the following Objectives:

1. To study the impact of Covid-19 pandemic on the pattern and composition of trade between India and Argentina.

2. To analyse the impact of Covid-19 pandemic on the Terms of Trade of India and Argentina.

DATA AND METHODOLOGY

Secondary data from different sources is used to analyse the impact of Covid-19 on the trade between India and Argentina from 2001 to 2020. The study is based on export data as per the Harmonized System (HS) of classification and data is obtained from various sources such as UNCOMTRADE database, UNCTAD and ITC Trade

data. Net Barter TOT, Income TOT and Gross Barter TOT are used to find the terms of trade between India and Argentina.

Net Barter Terms of Trade (NBTOT)

This is the most common and simple method of calculating trade terms of a country. It was given by Taussig (1927). The proportion between export and import prices is called the Net Barter terms of trade. It is an important pointer of the buying power of exports in paying for imports. It has been extensively identified as a short-term method to find out the changes in trading positions. This was called as commodity terms of trade by Jacob Viner (1995). The Net barter terms of trade can be expressed as:

$$\mathbf{Tc= (Px /PM) * 100}$$

Where

Tc = Net Barter Terms of Trade

Px = Unit Value Index of Exports

Pm = Unit Value Index of Imports

An upgrading in terms of trade takes place when the "increase in export prices is more than the import prices".

Income Terms of Trade (ITOT)

Perception of Income TOT was introduced by G.S. Dorrance in 1948. It is an upgrading over Net barter terms of trade. It is an index of the value of exports divided by the unit value or the price of imports. It demonstrates the volume of imports of a country that can be obtained from its export earnings. It measures the purchasing power of exports. It shows a country's fluctuating import capacity in relation to variations in its exports.

A rise in the index of ITOT implies that a country can import more goods in exchange for its exports. It can be written as:

$$\mathbf{TI = TC . QX}$$

Where

TI = Income Terms of Trade

TC = Net barter terms of trade
QX = Aggregate quantities of exports

Thus, income terms of trade method is an improved measure over the net barter terms of trade as it specifies that a nation can now afford more volume of imports with its export value. It is an improved measure of entire gains from international trade from an economy.

Gross Barter Terms of Trade (GBTOT)

Taussig introduced the concept of Gross Barter TOT. It links the total physical extent of imports to the total physical quantity of exports in an economy. An increase in the present year's gross barter terms of trade indicate a promising change which means more imports are obtained for a given volume of exports than in the base year. It estimates the quantity of imports and exports of a country. The formula can be written as:

$$TG = (QM / QX) * 100$$

Where
TG = Gross Barter Terms of Trade
QM = Aggregate quantities of imports
QX = Aggregate quantities of exports

The gross barter terms of trade will be better if the ratio between quantities of imports and exports are higher and a larger quantity of imports can be had for the same volume of exports.

Covid -19 and India's Changing Framework of World Trade

In 1991, the Indian government announced a sequence of changes to globalize the Indian economy. The economic impact of Covid-19 has been quite disturbing in India. Many countries including India and Argentina resorted to lockdowns to control the Covid-19 pandemic. These lockdowns confined millions of citizens to their homes and ceasing almost all economic activity.

The value of world trade dropped during the Covid-19 pandemic. The value of global trade decreased by 2.9 percent on an average in 2019. Exports from Argentina dropped around 16.1%. The crisis was the result of decrease in the volume of trade. The global trade volumes contracted to 8.9% in the first six months of 2020. The sudden fall in trade and production have negative consequences on the economy of both in India and Argentina.

Table 2: Trade Profile of India (US $ Billion from 2001 to 2020)

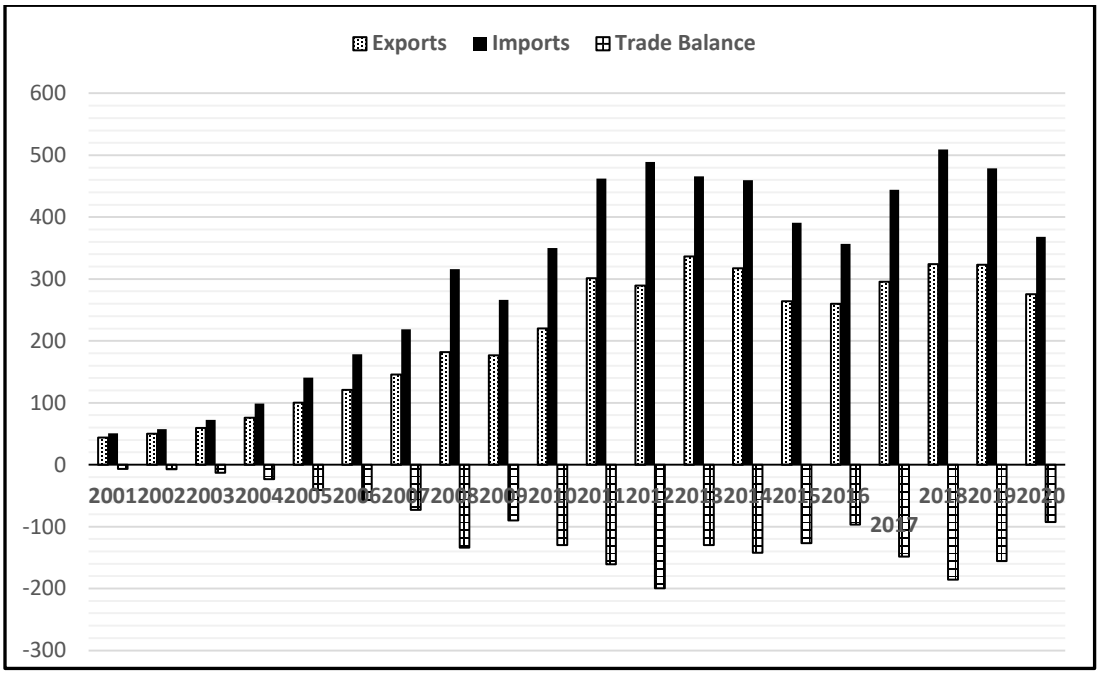
Year	Exports	World Export Share	Imports	World Import Share	Total Trade	World Trade Share	Trade Balance
2001	43.88	0.72	50.67	0.8	94.55	0.76	-6.79
2002	50.1	0.78	57.45	0.77	107.55	0.77	-7.36
2003	59.36	0.79	72.43	0.75	131.79	0.77	-13.07
2004	75.9	0.83	98.98	0.77	174.89	0.8	-23.08
2005	100.35	0.97	140.86	0.93	241.21	0.95	-40.51
2006	121.2	1.01	178.21	1.15	299.41	1.08	-57.01
2007	145.9	1.05	218.65	1.26	364.54	1.16	-72.75
2008	181.86	1.14	315.71	1.34	497.57	1.24	-133.85
2009	176.77	1.43	266.4	2.5	443.17	1.97	-89.64
2010	220.41	1.46	350.03	1.74	570.44	1.6	-129.62
2011	301.48	1.67	462.4	1.91	763.89	1.79	-160.92
2012	289.56	1.57	488.98	2.5	778.54	2.04	-199.41
2013	336.61	1.78	466.05	2.59	802.66	2.19	-129.43
2014	317.54	1.68	459.37	2.47	776.91	2.08	-141.82
2015	264.38	1.61	390.74	2.78	655.13	2.2	-126.36
2016	260.33	1.64	356.7	2.44	617.03	2.04	-96.38
2017	295.85	1.69	444.05	2.01	739.9	1.85	-148.21

2018	324	1.68	509.27	2.64	833.27	2.01	-185.27
2019	323.25	1.73	478.88	2.12	802.13	1.92	-155.63
2020	275.49	1.57	367.98	1.87	643.47	1.12	-92.49

Source: Compiled on the basis of UN COMTRADE database

It is obvious from table 2 that India's exports have increased from US$ 43.88 billion in 2001 to US$ 295.5 billion in 2017. Also, India's imports have expanded to US$ 444.05 billion in 2017. All these trends indicate that India is emerging as a global super power in the arena of trade.

Figure 1: Exports, Imports and Trade Balance of India from 2001- 2020 (In US $ Billion)



Source: Compiled on the basis of UN COMTRADE database.

Figure 1 explains that in 2020 there was a fall in India's exports from US$ 324 billion in 2018 to US$ 275.49 billion. Also, India's imports contracted to US$ 367.98 billion in 2020. The total trade was decreased to US$ 643.47 billion in 2020. It was the impact of Covid-19 pandemic at the world level as a result of which lockdown was imposed in India and Argentina.

Impact of Covid-19 pandemic on India's Exports to Different Countries

The Covid-19 pandemic disrupted India's trade and economic activities. The fall in India's exports and imports is the result of spread of Covid-19 pandemic at the world level. There was lockdown and social distancing which resulted in an immediate supply shock followed by a demand shock. India's exports were suffered and imports were also contracted sharply.

Table 3: India's Exports to Different Countries of the World (In US $ Thousand)

Countries	2016	2017	2018	2019	2020
USA	41982373	46028324	51764145	54288194	49320596
UAE	30675031	30020630	29100195	29539358	17953335
China	8914967	12500767	16503442	17278833	19008267
Singapore	7384679	11598045	10494472	10738689	8295020
United Kingdom	8564111	8957197	9767380	8797200	7767620
Germany	7177200	8235876	8972262	8569825	7656985
Bangladesh	5668089	7212092	8763030	8242923	7912821
Netherlands	4867884	5432400	8677864	8906975	6261190
Nepal	4525659	5519572	7316477	7108863	5854597
Belgium	5355723	6221609	6824378	6184548	4565324
Vietnam	5956938	8116919	6715614	5512870	4500549
Malaysia	4188132	5547733	6567583	6268537	6194006
Italy	4463624	5656895	5533394	5190232	4348168
Saudi Arabia	5044523	5218976	5501775	5974037	6154273
Turkey	4472728	4922767	5363419	4575956	3636047
France	4871387	5045601	5295238	5434291	4363548
Korea	3464987	4378168	4817513	4653980	4516496
Indonesia	3131114	3763710	4802577	4515383	4363742
Japan	3826808	4499205	4750985	4815593	4043285

Source: Compiled on the basis of UN COMTRADE database.

It is clear from table 3 that India's exports to USA decreased to US$ 49320596 thousand in 2020 and to UAE decreased to US$ 17953335 thousand in 2020 as compared to US $ 29100195 thousand in 2018. Exports of India to different countries of the world also declined due to the impact of Covid-19 pandemic. India's exports declined heavily in 2020 due to the impact of Covid-19 pandemic. Most of India's trading partners were under severe lockdown due to Coronavirus pandemic which resulted a sharp contraction in exports, imports and disruption of supply chains as well as contraction in outputs.

Impact of Covid-19 pandemic on India's Imports from different Countries

India's exports of goods and services were US$ 322 billion while imports were US$ 617 billion in 2018 according to data sourced from WITS. The corresponding figures were US$ 483 billion and US$ 524 billion respectively in 2017. Merchandise imports dropped from US$43.72 billion in march 2019 to US$ 31.16 billion in march 2020. The coronavirus Pandemic has stuck the biggest economies of the world including India and Argentina.

Table 4: India's Imports from Different countries of the World
(In US $ Thousand)

Countries	2016	2017	2018	2019	2020
China	60479988	71890425	73845717	68402093	58798825
USA	20393719	24070494	32821243	34917972	26615673
Saudi Arabia	18459918	21077369	28523033	27000125	17723810
UAE	19239922	23105072	27018240	30308879	23901107
Iraq	9973865	15303164	23113210	22085016	16172948
Switzerland	14854549	20395480	18090992	17722676	11312540
Korea	12213417	16084579	16441988	16111284	12168869
Indonesia	12188631	16228107	16098059	15563891	12020795
Iran	8253289	11084449	14778965	3375420	297122
Singapore	6719133	7232165	14483646	14893892	12306747

Australia	8730208	14345897	14126314	10569385	7263296
Germany	11498779	12659429	13891494	12272543	9684429
Japan	9808025	10464507	12577590	12744472	10206851
Nigeria	7407117	8339221	11203247	10613135	6335326
Qatar	7479097	8096078	10621463	9525661	8121369
Malaysia	8652905	8897929	10436691	10407571	7378041
Belgium	7479537	5952290	9562541	9354388	6623542
Kuwait	4034561	6116047	7830642	9137051	5975056
Thailand	5316104	6453481	7671888	7034310	5223762

Source: Compiled on the basis of UN COMTRADE database.

It resulted into a big supply shock for major countries of the world including India. Economic slowdown impacted the trading partners of India including Argentina. India's imports declined from China, USA, UAE, Saudi Arabia, Indonesia and Singapore.

Impact of Covid-19 Pandemic on the Pattern and Composition of Trade between India and Argentina

Argentina is the storehouse of agriculture and economic activity. Bilateral trade between India and Argentina is enhanced with the increase in economic cooperation between these two countries. India imports important items like soybean oil, sunflower oil, leather and wool etc. from Argentina. The percentage share with Argentina was 0.36%in 1996-97 which further increased to 0.53% in 2001-02. India's Percentage share of total trade with Argentina decreased to 0.37% in 2004-05 which further decreased to 0.17% in 2008-09. The percentage share with Argentina increased about 0.47% in 2015-16 which decreased to 0.38% in 2017-18. The total trade with Argentina increased in 2007-08 to US$ 1196.93 million. It decreased to US$ 942.17million in 2009-10. It further increased to US$1738.66 million in 2012-13. Transactions corresponding to Argentina augmented to US$3011.47 million in 2016-17 and it further decreased to US$ 2937.91 million in 2017-18.

If we study volume of India's exports to Argentina then it can be concluded that exports from India directing towards Argentina amplified to US$ 186.32 million in 2004-05. It further increased to US$ 708.71 million in 2017-18. Thus, we can conclude that India's exports to Argentina have increased from 1996 to 2018. The percentage share of exports from India to Argentina have declined from 0.27% in 1997-98 to 0.17% in 1999-2000 which increased to 0.19% in 2005-06. Similarly, the pattern of India's total imports from Argentina has changed. In 1996 the Percentage share of imports was 0.51% which further increased 0.65% in 2016-17 and decreased to 0.48% in 2017-18.

Table 5: Trade Pattern between India and Argentina from 2001 to 2020 (US $ Million)

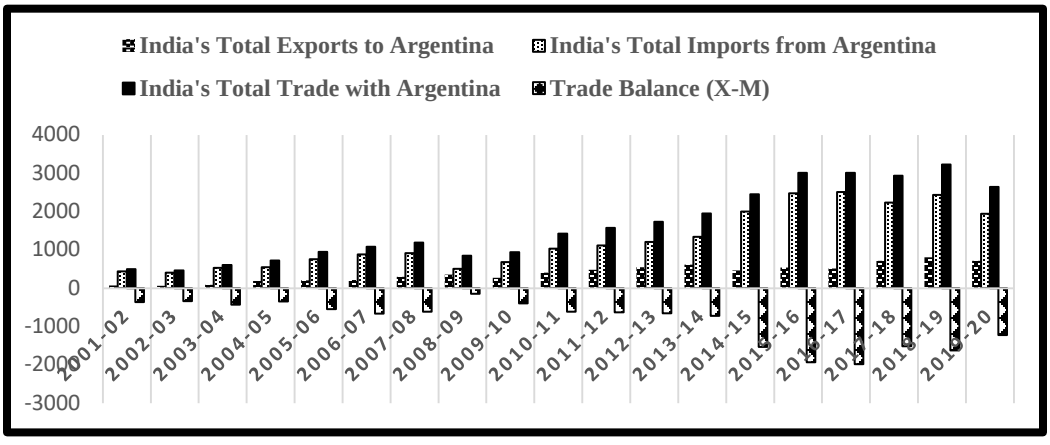
Year	India's Total Exports to Argentina	Exports % Share	India's Total Imports from Argentina	Imports % Share	India's Total Trade with Argentina	% Share	Trade Balance (X-M)
2001-02	64.62	0.15	436	0.85	500.62	0.53	-371.38
2002-03	60.29	0.11	404.14	0.66	464.43	0.41	-343.85
2003-04	87.33	0.14	523.96	0.67	611.29	0.43	-436.63
2004-05	186.32	0.22	539.59	0.48	725.91	0.37	-353.27
2005-06	199.5	0.19	754.04	0.51	953.54	0.38	-554.54
2006-07	211.38	0.17	876	0.47	1087.38	0.35	-664.62
2007-08	290.09	0.18	906.84	0.36	1196.93	0.29	-616.75
2008-09	352.01	0.19	499.07	0.16	851.08	0.17	-147.06
2009-10	269.96	0.15	672.21	0.23	942.17	0.2	-402.25
2010-11	404.36	0.16	1022.73	0.28	1427.09	0.23	-618.37
2011-12	473.57	0.15	1105.55	0.23	1579.12	0.2	-631.98
2012-13	539.95	0.18	1198.71	0.24	1738.66	0.22	-658.76
2013-14	611.48	0.19	1338.35	0.3	1949.83	0.26	-726.87
2014-15	460.19	0.15	1992.25	0.44	2452.44	0.32	-1532.06

2015-16	536.346	0.2	2471.52	0.65	3007.866	0.47	-1935.174
2016-17	510.72	0.19	2500.75	0.65	3011.47	0.46	-1990.03
2017-18	708.71	0.23	2229.2	0.48	2937.91	0.38	-1520.49
2018-19	802.24	0.54	2426.3	0.52	3228.54	0.56	-1624.06
2019-20	710.32	0.32	1935.21	0.29	2645.53	0.29	-1224.89

Source: Ministry of Commerce, Government of India

The total trade with Argentina increased in 2018-19 to US$ 3228.54 million. It decreased to US$2645.53million in 2019-20. India's exports to Argentina have decreased in 2019-20. The percentage share of exports from India to Argentina have declined from 0.54% in 2018-19 to 0.32% in 2019-20. Similarly, the pattern of India's total imports from Argentina has changed. In 1996 the Percentage share of imports was 0.51% which further increased 0.65% in 2016-17 and decreased to 0.48% in 2017-18. In 2018-2019 the percentage share of imports was 0.52% which further decreased 0.29% in 2019-2020. The trade volumes were affected for India as well as Argentina being the worst hit in terms of exports and imports. The downfall in trade was the direct impact of Covid-19 pandemic as restrictions were imposed directly on transportation and travel. Also, both India and Argentina were having lockdown which resulted a stoppage on exports, imports and normal course of business except for essential commodities.

Figure 2: Trade Pattern between India and Argentina (US $ Million)



Source: Calculated and compiled on the basis of UNCTAD Data

Impact of Covid-19 Pandemic on India's Major Export Items to Argentina

The 2019 coronavirus pandemic's economic effect in India has been hugely upsetting regarding the export basket of India to Argentina. India's foremost export commodities to Argentina are vehicles except railways or trams, parts and accessories etc. Its export was US $34.24 million in 2008-09 which increased to US $102.48 million in 2016-17.Another important item of export is organic chemicals whose exports were US $ 52.97 million in 2008-09 and its exports to Argentina increased to US $ 66.93 million in 2016-17 but its exports to Argentina decreased to US $ 59.21 million in 2019-20 and other items of exports from India to Argentina are chemical products whose exports decreased to US$34.04 million in 2019-20 and another important items of exports are apparel and clothing, manmade staple fibers and other colouring products etc. The export basket of India to Argentina also consists of miscellaneous chemical products and plastic etc.

Table 6: India's Major Export Items to Argentina (In US $Million)

HS Code	Products	2015	2016	2017	2018	2019	2020
29	**Organic Chemical**	73.2	66.93	74.21	82.14	84.01	59.21
30	**Pharmaceutical Commodities**	8.73	13.25	19.12	25.45	36.11	23.02
32	**Tanning/ Dyeing and Colouring Products**	23.54	19.09	25.02	32.01	39.12	26.23
38	**Chemical Related**	27.88	33.21	41.02	49.22	51.04	34.04

	Products						
39	**Plastic and Products**	12.31	18.24	22.04	29.87	36.04	26.05
40	**Rubber and Articles**	11.59	13.18	19.14	21.05	32.06	18.59
54	**Man-made filaments.**	28.83	16.51	19.98	22.04	29.45	15.02
55	**Man Made Staple Fiber**	16.37	21.05	25.04	30.22	39.04	22.11
62	**Apparel / Clothing Accessories (not Knitted)**	19.37	30.04	39.04	41.02	47.22	32.44
87	**Vehicles except Rails/ Trams**	69.09	102.48	122.04	135.14	144.75	102.04

Source: Based on Data derived from UNCOMTRADE

Table 6 shows that exports of all the major commodities from India to Argentina declined in 2019-20 which was the effect of Covid-19 pandemic. The exports of rubber and articles also declined to US$18.59 million in 2020. The exports of vehicles except rails or trams also declined to US $102.04 million in 2020.This can be clearly attributed to the halting of India's trade with Argentina and rest of the world due to Covid-19 pandemic.

Impact of Covid-19 Pandemic on India's Major Imports from Argentina

Vegetable and animal fats and oils and their edible fats, animal or vegetable crudewax remain important items imported from Argentina to India. Its imports were US$402.64 million in 2008-9 which further increased to US$4212.45 million in 2019 but its

imports declined to US$ 2536.14 million in 2020.Another important item of import from Argentina to India is leather coverings (except fur) whose import was US$23.31million in 2008-09. Ores, slag and ash is another item of import from Argentina whose imports were US$ 44.13 million in 2016 which decreased to US$ 24.33 million in 2020.Another items of import from Argentina to India are Coffee, tea, mate and spices, cereals, organic chemicals, plastic and articles and cotton. These are the products which are imported from Argentina to India whose share has decreased in 2020 due to the tsunami of Covid-19 pandemic.

Table 7: India's Major Import Items from Argentina (InUS $Million)

HS Code	**Products**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**
7	**Edible Vegetables / Roots**	6.5	19.93	20.14	32.25	39.45	22.12
9	**Coffee/ Tea/ Spices**	2.43	2.82	3.02	3.98	4.01	2.98
10	**Cereals.**	4.09	31.94	42.22	56.25	64.12	41.22
15	**Animal/ Vegetable Fats, Waxes**	1583.75	2291.92	2998.32	3214.22	4212.45	2536.14
26	**Ores, slag and ash.**	47.29	44.13	51.23	32.01	48.22	24.33
29	**Organic chemicals**	17.73	16.84	19.23	22.04	26.55	19.98
32	**Tanning/ Dyeing/ Paints/ Inks**	6.02	5.19	4.02	6.22	7.12	4.13

39	**Plastic & articles thereof.**	0.18	13.61	22.14	30.01	39.25	21.14
41	**Raw Hides and Skins**	53.57	42.4	39.23	44.21	49.68	32.21
52	**Cotton**	6.38	7.62	5.21	7.04	8.22	6.23

Source: Ministry of Commerce, Government of India

Thus, it can be concluded that trade cannot be untouched in today's symbiotic and globalised economic order. Trade between India and Argentina was disrupted as national borders were sealed. Restrictions were also imposed on exports and imports of essential commodities, medicines and protective equipments.

Impact of Covid-19 Pandemic on Terms of Trade of India and Argentina

The present study restricts itself to Net barter terms of trade index, Income terms of trade index and Gross barter terms of trade index. For this analysis, unit value indexes are used. This study investigates the fluctuations and inconsistency in terms of trade of India and Argentina caused by Covid-19 pandemic. India largely exports primary commodities as well as manufactured commodities. Argentina is the net exporter of manufactured products as well as primary products also. The industrial exports from Argentina are different from manufactured exports.

Covid -19 Pandemic and Net Barter Terms of Trade Index of India and Argentina

There are variations in prices of different categories of manufactured goods in India and Argentina. Table 8 shows the time series of Net barter terms of trade of India and Argentina for the period from 2001 to 2020. The NBTOT for India was 97.82 in 2001 which declined to 88.63 in 2002. It further increased to 96.2 in 2003 and decreased in the year 2004 after that the declining trend started and it almost remained below 100 for most of the period up to 2014. From the year 2015 onwards, it shows an increasing trend for NBTOT. But it declined to 104.32 in 2020. The unexpected changes in commodity prices at the beginning of Covid -19 crisis have resulted fluctuations in the

terms of trade. Argentina underwent a massive terms of trade boom during the nineteenth century. It has announced numerous restrictions for exports and imports. Various tariff related measures have been adopted to refine the terms of trade during the period from 2001 to 2019. Argentina has introduced multiple trade restrictions in recent years.

Net Barter TOT of Argentina remained below 100 during the initial period of the study. From the year 2003 onwards, it started increasing up to the year 2013 and in the year 2014 it declined to 152.45 and again it declined to 145.84 in the year 2015. The NBTOT increased to 155.23 in 2016 and again in 2017 it declined to 153.35. In the year 2020 it was 154.34. Thus, there are variations in terms of trade of Argentina. Reason behind these fluctuations in NBTOT of Argentina during initial years is either the decline in export prices of commodities or the increase in its import prices. Also, increase in export prices is less than the increase in import prices of commodities.

Table-8: Net Barter Terms of Trade Index of India and Argentina (2000=100)

Year	India	Argentina
2001	97.82	97.62
2002	88.63	99.88
2003	96.2	108.03
2004	91.68	115.65
2005	87.82	112.21
2006	85.7	117.17
2007	81.61	124.39
2008	81.61	139.42
2009	95.01	140.67
2010	93.47	144.65
2011	89.99	160.46
2012	90.08	167.36
2013	92.45	156.36

2014	93.82	152.45
2015	105.65	145.84
2016	108.51	155.23
2017	103.48	153.35
2018	120.21	162.33
2019	121.34	168.34
2020	104.32	154.34
Average	96.47	138.78
Standard Deviation	11.14	23.04

Source: Calculated and compiled on the basis of UNCTAD Data

Terms of Trade of India and Argentina deteriorated due to the outbreak of Covid-19 pandemic massively at the world level which disrupted the production network and supply chains. In terms of trade specifically, it can be observed that the trend in trade volume has not improved to the pre-crisis levels and is projected to be severely reduced due to the Covid-19 pandemic.

Covid -19 Pandemic and Income Terms of Trade Index of India and Argentina

To study the complete portrait, it is necessary to have an idea about the Income terms of trade from 2001 to 2017. As is evident that India's income terms of trade depict an uninterruptedly growing trend from 2001 to 2020 except for the year 2012 for which Income terms of trade has declined from 346.38 in 2011 to 340.45 in 2012 and which further increased to 378.93 in 2013. It further increased to 478.62 in 2017. The Income terms of trade has declined from 499.01 in 2018 to 298.72 in 2020. Thus, it can be concluded that from 2001 to 2020 the Income TOT of India are increasing except the year 2020. The Covid-19 shock has affirmed that trade terms are very volatile and fluctuate very frequently.

Table -9: Income Terms of Trade Index of India and Argentina (2000=100)

Year	India	Argentina
2001	106.14	103.61
2002	112.14	106.12
2003	128.85	119.15
2004	142.55	129.03
2005	166	139.69
2006	181.08	152.64
2007	197.54	171.04
2008	231.11	190.45
2009	253.07	171.56
2010	312.94	200.68
2011	346.38	230.64
2012	340.45	223.58
2013	378.93	201.19
2014	403.99	180.92
2015	446	170.21
2016	470.58	193.54
2017	478.62	188.13
2018	499.01	198.21
2019	301.21	173.44
2020	298.72	156.22
Average	289.76	170.00
Standard Deviation	129.23	36.17

Source: Calculated and compiled on the basis of UNCTAD Data

Income terms of trade was 103.61 in the year 2001. After that from the year 2002 onwards it started increasing and it increased up to the year 2008 and in the year 2009

it declined to 171.56. In the year 2010, it increased to 200.68. Again, the trend went on increasing and it was 201.19 in 2013.After that it started declining and it was 170. 21 in 2015 which increased 193.54 in 2016 and again it decreased to 156.22 in 2020. Covid-19 pandemic led to complete lockdown across the countries including India and Argentina which resulted a severe disruption on trading of goods and services.

Covid -19 Pandemic and Gross Barter Terms of Trade Index of India and Argentina

GBTOT of India also manifests clearly an increasing pattern during the period of study. The GBTOT was 103.59 in 2005 which increased to 121.89 in 2009. It increased to 145.22 in 2018 which decreased to101.23 in 2020. Thus, the gross barter terms of trade for India is showing an increasing trend for most of the times from 2001 to 2020. It can be the impact of trade policy reforms initiated by the government of India from 1991 onwards and change in foreign trade policies from time to time but the decline in gross barter terms of trade in 2020 was the impact of Covid-19 pandemic at the world level.

Table-10: Gross Barter Terms of Trade Index of India and Argentina (2000=100)

Year	India	Argentina
2001	93.51	77.69
2002	83.66	36.38
2003	97.37	52.26
2004	98.16	78.6
2005	103.59	83.64
2006	103.25	90.45
2007	102.53	104.19
2008	110.6	119.87
2009	121.89	103.49
2010	118.96	126.71
2011	113.5	150.89

2012	122.24	150.07
2013	112.4	161.81
2014	112.03	153.4
2015	125.99	161.9
2016	126.76	157.85
2017	127.18	183.88
2018	145.22	197.23
2019	114.4	154.43
2020	101.23	112.32
Average	111.72	122.85
Standard Deviation	14.35	44.06

Source: Calculated and compiled on the basis of UNCTAD Data

The Gross barter terms of trade of Argentina also exhibits more or less an increasing pattern during the period of the study. The trend was increasing from 2001 to 2018 with certain fluctuations. It was 183.88 in the year 2017. GBTOT started decreasing from 2019 to 2020. The reason behind the fluctuation in the terms of trade of Argentina is the decline in its export prices and increase in import prices. The export of manufactured goods of Argentina basically composed of processed products. The export earnings of Argentina are continuously increasing it implies that Argentina is gaining from trade. The value as well as volume of exports of Argentina have increased during the study period.

Covid-19 and Strategies to Promote the Trade between India and Argentina

There is a need to explore possibilities for enhancing and diversifying the exports from India to Argentina. Indian exports have been passing through a tough time since 2019 and the covid-19 has deteriorated the situation. Trade policies in India should be framed in such a way that the negative impacts of covid-19 are reduced and the gains are maximised. Strategies should be formulated to overcome trade challenges due to

covid-19. The Government of India has already taken various measures to start the economy and eventually the trade once the pandemic closes down. A comprehensive package can be a way forward which can provide relief for the improvement of export benefits.

There is a need to save the earth from the pandemic if we need to live together. Countries should introduce more stimulus packages to support the exports. Indian government has given Rs.33000 crore boosts for project exports through National Export Insurance Account (NEIA). It provides covers to buyer's credit and supports exporters. It has been decided to infuse equity in ECGC over next five years to boost export insurance cover by Rs. 88000 crores. New Trade Measures (NTM) related to pandemic should replace the traditional tariff and non-tariff barriers. It is the need of the time that countries should work together while dealing with the post crisis recovery.

To tackle the impact of Covid-19, the central government announced a variety of measures. Problem is that any prediction about the economy or trade depends upon the prediction of ending of pandemic. This marks the situation different from a crisis which is either economic or natural. The possible solution to step up trade and economic activities depends upon trade policies implemented by the government. Trade cannot flourish without appropriate policies to recover the economy. A combination of fiscal and monetary stimulus is required. Alternative trade increasing strategies are required to boost the trade between India and Argentina. The Covid-19 induced lockdown has caused disruptions in trade and economic activity. The supply chains have been disrupted all over the world including India and Argentina. In such circumstances, alternative strategies must be conceived. The production system should be consolidated in a lesser number of locations.

CONCLUSION

With Covid – 19 affecting countries including India and Argentina at various times and rates, there is a need to deliberate how to retain trade flowing in the current crisis and to ensure global recovery. A combination of fiscal, monetary and trade policy measures are required to revive the economy and trade of India at these uncertain

times. No country can fight alone with this pandemic thus coordinated measures must be adopted by both India and Argentina.

The covid-19 crisis has badly impacted the world economy and international trade severely. This crisis has led to some important shifts in the pattern and composition of trade. This sudden slowdown in economic activities due to Covid-19 pandemic has affected the volume and pattern of International Trade. India's exports and imports have contracted sharply. There was a reduction in exports of top performers such as readymade garments, engineering goods, leather products, gems and Jewellery, coal, minerals and handicrafts. Exports of agricultural products also declined.

An important point to consider is that trade policy reforms should be initiated in response to the covid-19 pandemic. In India and Argentina, trade procedures should be streamlined and policy measures should be initiated to accelerate the movement, release and clearance of goods in transit. These measures will address the downturn in trade related to covid-19 pandemic and will support the economic recovery of India and Argentina. A combination of fiscal, monetary and trade policy measures is required to revive the trade and economy in this uncertain situation. Policymakers should try to find out a comprehensive economic strategy to combat with this unparalleled scenario in the post covid-19 pandemic world. Also, trust with the government and its policies will support playing a key role in ensuring continued transparency, boosting confidence of the traders and keeping the global supply chains going for essentials.

Government should continue with the fiscal stimulus packages for some more time at least till the economy recovers. A comprehensive approach addressing the impact of the current crisis may place the Indian economy back on a sustained growth path and support the country's trade and economic development. But this dismal situation of India's trade is not expected to continue for a long period of time. India must strengthen its relationship with Argentina and play an active role for the development of trade relationships. India and Argentina are poised to restructure their ties at the economic and strategic level. The study reveals that India has auspicious future

projections of its trade with Argentina. The impact of Covid -19 pandemic on trade during 2019 to 2020 is also visible as the trade has declined during this period.

The findings of the terms of trade revealed that the trade potentials of India with Argentina are stronger and significant between them. Further trade policies should be formed in such a way that the trade is enhanced between them in future also. Argentina should adopt a more efficient and coordinated approach to promote trade and investment flows with India and should make great efforts to endorse economic development by improving the international competitiveness in various sectors of economy in future. Thus, in this framework, this analysis suggests the special support packages by the government are essential for the revival of the trade and economic development in both India and Argentina and this would finally result in a win -win situation for both sides. Further economic policies may be implemented for the correction of deteriorating terms of trade which will further enhance the growth rate of these countries. India should play an important role in building the trade relationships with Argentina post Covid-19 period when the partnership will be guided by new challenges and new trade policies.

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ANALYZING THE ROLE OF SOCIAL MEDIA INFLUENCERS IN SHAPING CUSTOMER PURCHASE INTENTIONS IN THE COSMETIC SECTOR IN DELHI,INDIA.

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Abstract

The report titled "The Role of Influencer Marketing in Shaping Consumer Brand's Perception" delves into the burgeoning (rapidly growing) field of influencer marketing and its profound impact on consumer brand perception. The research aims to explore how social media influencers and brands interact with each other. It delves into the mutually beneficial relationship that exists between them. It analyzes the relationship between social media influencers and Customer Purchase Intentions and how their collaboration is transforming traditional marketing. The study explores how influencers through their relatability and extensive reach engage with the consumer, foster brand image and brand trustworthiness, and drive their purchase decisions. It further explores how collaborations with influencers allow brands to engage with consumers in a more personalized and authentic manner. The study will underscores the importance of influencer marketing for businesses navigating consumer behavior

in the digital age. The report will conclude by proposing areas for future research, underscoring the dynamic nature of this field and the necessity for ongoing exploration.

Keywords: *influencer marketing, social media influencers, brand image, brand trust, consumer behavior, collaborations*

INTRODUCTION

In today's digital age, social media has become an integral part of our daily lives. People all around the world use social media platforms to connect, share, and gather information. With the rise of influencers, social media has also become a powerful marketing tool for businesses in various industries, including cosmetics. With platforms like Facebook, Instagram, Twitter, and LinkedIn boasting billions of active users worldwide, social media marketing offers unparalleled access to diverse audiences spanning demographics, geographies, and interests. Social media platforms serve as online markets where customers look for validation, product recommendations, and inspiration. According to Forbes, 2017, influencers possess a substantial following and are deemed persuasive, which is why numerous firms aim to collaborate with them and control over what customers choose to purchase. They play a crucial role in influencing consumers' buy intentions because of their capacity to produce real, relatable content that connects with viewers. Furthermore, a survey was conducted in 7 industries in the year 2017 revealed that Approximately 85% of brand marketers favored influencer marketing in their campaigns in 2017, and social media influencer content was proven to be 7 times more effective than professional filmed content (Ki and Kim, 2019).

The cosmetic industry in India is rapidly expanding, spurred on by rising disposable incomes, escalating urbanization rates, and the burgeoning youth population. Simultaneously, the cosmetics sector in India has experienced a notable shift in customer behavior as a result of social media's explosive expansion. Consumer behavior is no longer only driven by traditional marketing methods. Rather, social media platforms have become influential and strong, having a big impact on how people see and use cosmetics by endorsing beauty items and businesses, social media

influencers have a significant impact on the purchasing intentions of their followers. Nonetheless, investigating the role of social media influencers in shaping customer purchase intentions within the Indian cosmetic sector has become a crucial topic of research.

Objectives of Research

1. Investigate the impact of social media influencers on customer purchase intentions in the Indian cosmetic market.
2. Identify the key characteristics of effective influencers.
3. Explore the ethical considerations associated with influencer marketing.

LITERATURE REVIEW

Beauty firms were among the first to recognize social media's power and used it as a crucial component of their marketing strategy. This is primarily because influencer marketing is very effective in visual formats, and beauty greatly depends on visual appeal. The primary factors influencing customers' attitudes that affect their buy intentions were found to be product match-up, source attractiveness, and source legitimacy in a study on customer attitude as a mediating factor between social media influencers and customer purchase intention. (Lim et al., 2017)

Influencers have a big role in influencing consumer decisions, especially when it comes to services, apparel, shoes, and cosmetics. Influencers increase sales in addition to enhancing a brand's image and increasing awareness. Indian individuals consider a number of factors while making purchases, including Product Matchup, Perceived Authenticity, Trust, and Influencer Content Quality. (Tabassum and others, 2020).

Opinion leadership attributes are determined by the impact of influencers' Instagram accounts and their uniqueness, not by their quantity. electronic word-of-mouth, beauty vloggers, and celebrity endorsers. (E-WOM). (Pratiwi et al., 2019). The influence of brand image on buying decisions has been extensively studied. It is apparent, however, that influencers have an effect on the brand image, which determines the intention to buy.(Hermanda et al., 2019).Through influencer endorsements that affect customers' buying intentions, sales are fueled by the influencers' credibility, competence,

dependability, sponsored content, and physical awareness (Hermand et al., 2019).The credibility, expertise, and trustworthiness of influencers, along with sponsored content and physical awareness, contribute to driving sales through influencer endorsements that impact customers' purchase intentions. (Nagori et al., 2020). Factors such as celebrity credibility, reputation, and persuasive capabilities are crucial in influencing purchase decisions. (Widyanto et al., 2020).There hasn't been enough research done on how Instagram celebrities affect consumer purchasing behavior, particularly concerning Indian consumers and their propensity to buy based on the trustworthiness of the source through social media advertising. (Hermand et al., 2019).Buying decisions are heavily influenced by influencers, particularly when it comes to clothing, shoes, cosmetics, and services. Influencers raise revenue in addition to improving a brand's reputation and raising awareness. When making a purchase, Indian adults take into account various criteria such as Influencer Content Quality, Trust, Perceived Authenticity, and Product Matchup. (Tabassum et al., 2020).

Social media influencers (SMIs) have the power to change the attitudes, behaviors, and perceptions of those who follow them. This includes how they choose and reject goods and services that don't fulfill their needs and desires. In the study of influencer marketing, several scholars base their research on three essential characteristics that are critical for successful persuasion: authority, credibility, and social appeal. These characteristics are connected to compliance, internalization, and identification, respectively. A credible endorser usually positively influences consumers' perceptions. Influencers play a crucial role in establishing direct connections and strengthening brand loyalty, providing a more comprehensive feedback mechanism compared to conventional media. Contrary to conventional celebrity endorsements, brand endorsements within the personal lives of social media influencers (SMIs) are typically perceived by consumers as more pertinent. They foster a feeling of inclusion and communal assistance among their viewers, who possess akin principles and aspirations.

According to Ki and Kim, Social Media Influencers (SMIs) play a dual role as taste leaders and opinion leaders. This dual role plays a crucial role in influencing consumers to imitate these influencers, which ultimately leads to the purchase of

products, services, or brands that they endorse. The importance of specific qualities in the content produced by SMIs, such as visual appeal, prestige, and expertise, is emphasized as influential factors in shaping consumers' perceptions. Van Eldik et al. proposed that forming a bond with the audience is a crucial factor in determining the success of social media influencers. The establishment of perceived trustworthiness relies on the influencer's capacity to build emotional and interpersonal connections with their audience. Schouten et al. agree that simply using an endorser (influencer) in an advertisement does not automatically guarantee the advertisement's success. Their research, however, did not find any correlation between the fit of the product with the endorser and the type of endorser in terms of trustworthiness or expertise. The study indicates that the likability of the influencer could be a key factor in understanding the relationship between endorser type and the effectiveness of advertising.

In today's digital age, influencers hold immense power in shaping consumer behavior. Their ability to evoke positive emotions and drive purchases has been proven by a study conducted by Ki and Kim. The study reveals a strong correlation between the efforts of Social Media Influencers (SMIs) to influence and the response of consumers. It suggests that the influence of SMIs follows a sequential pattern, starting with the development of positive attitudes, leading to a desire to emulate their behaviors, and ultimately impacting consumers' social sharing and purchasing decisions. As consumers develop positive attitudes towards SMIs, they are inclined to imitate and mimic the behaviors and preferences promoted by these influencers. This mimicry, in turn, significantly influences both social Word-of-Mouth (sWOM) activities and consumers' intentions to make purchases.

RESEARCH METHODOLOGY

Data can be collected using various research approaches. According to Creswell (2014), there are three main types of research approaches: qualitative, quantitative, and mixed methods. Qualitative research emphasizes understanding the "why" rather than the "what." This approach delves into real-life experiences, providing an in-depth understanding of the collected data. Moreover, quantitative research test different theories (hypotheses) by looking at the relationship between different variables, the dependent variables and the independent variables. Furthermore, quantitative research

evaluates theories (hypotheses) by analyzing the connections between various variables, focusing on both dependent and independent variables.

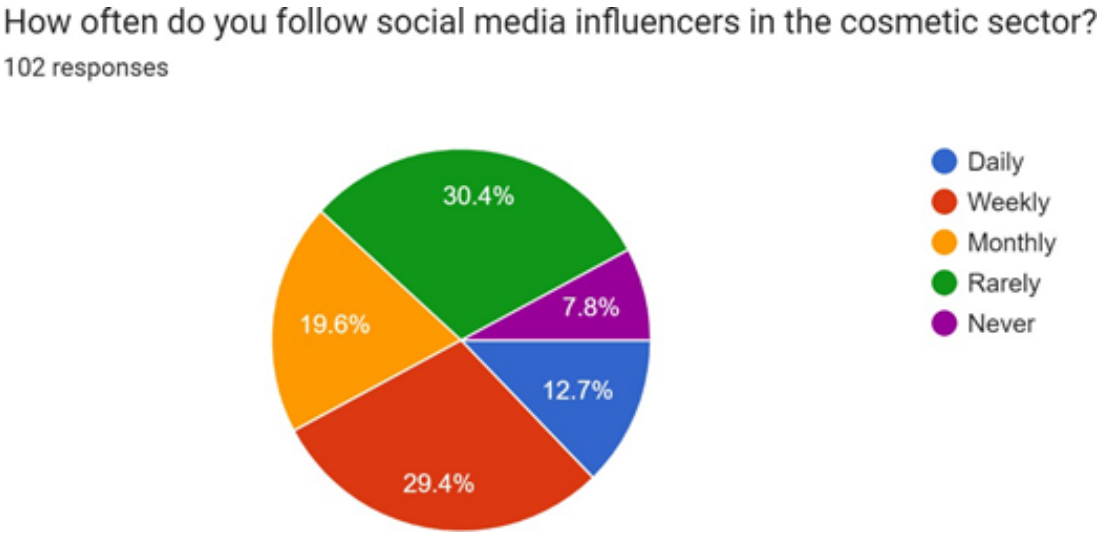
A quantitative research approach was selected for this study as the method of data collection. The study necessitated both open-ended and close-end questions, which is gathered through online surveys. Participants were invited to take the survey through a link shared on social media platforms like facebook, Instagram and in various WhatsApp groups.

Sample Size: A Survey was conducted among 102 people who uses cosmetic product on usual basis in Delhi.

Sample Area: The people across Delhi

RESEARCH METHODOLOGY

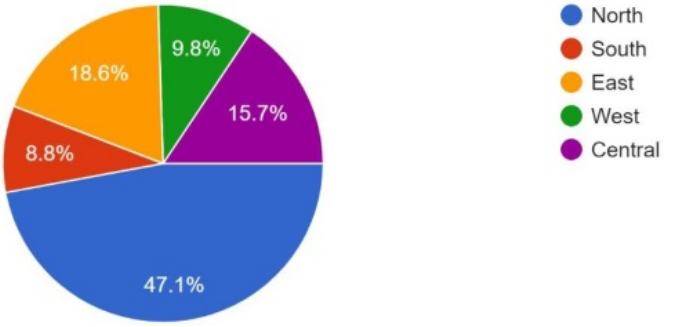
Both Primary and secondary source is used to collect the data. The questionnaire is distributed among the people to gather the responses. The questionnaire included: Demographic Questions, Introductory Questions and Main Questions.



Analysis

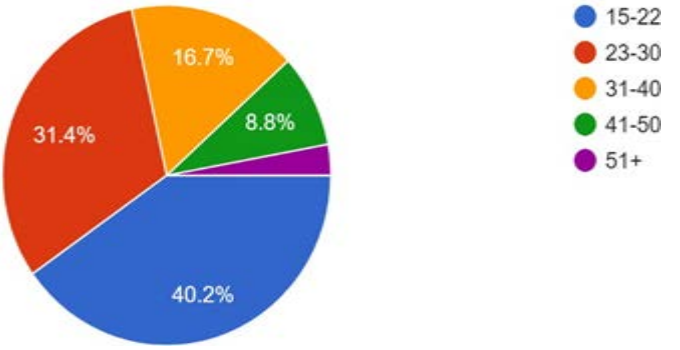
Which city or region of Delhi do you reside in?

102 responses



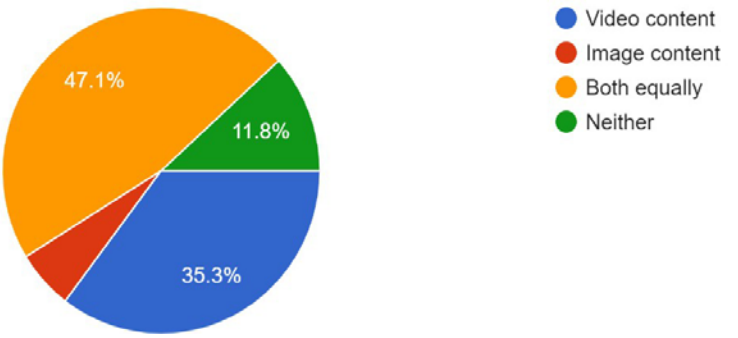
Age

102 responses

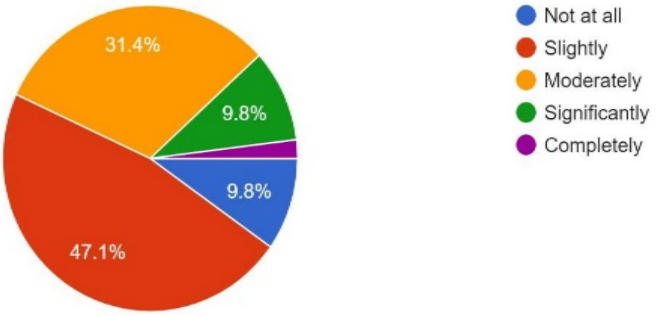


Do you prefer watching video content (e.g., tutorials, and reviews) or viewing images (e.g., Instagram posts) when influencers showcase cosmetic products?

102 responses



How much do social media influencers influence your decision to purchase cosmetic products?
102 responses



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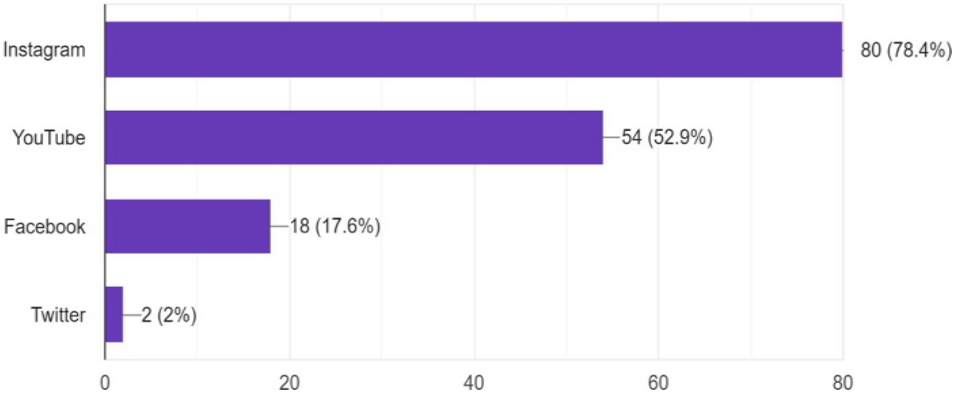
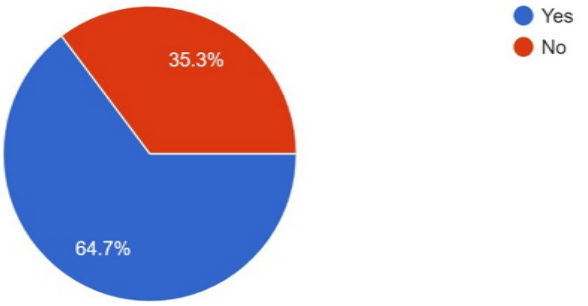
Which social media platforms do you primarily use for cosmetic-related content?
102 responses

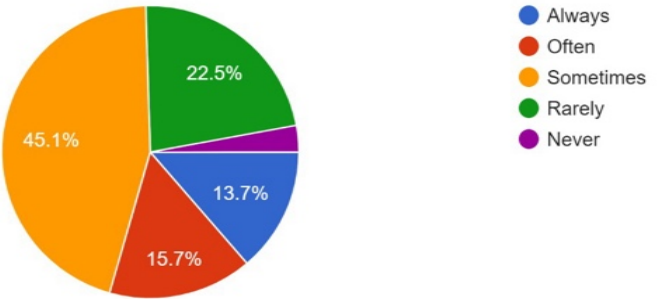


Have you ever purchased a cosmetic product based on a recommendation from a social media influencer?
102 responses



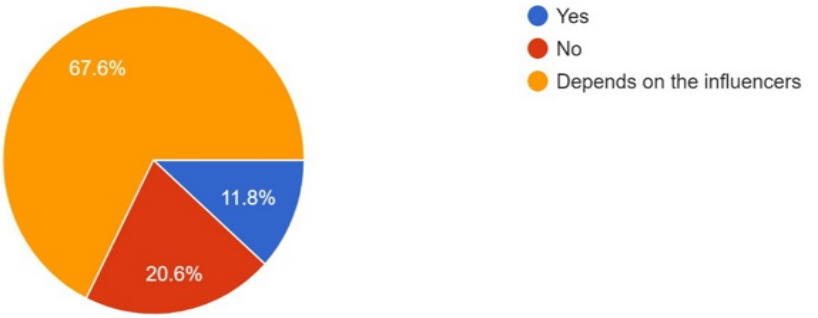
How often do you research a cosmetic product after seeing it recommended by a social media influencer?

102 responses



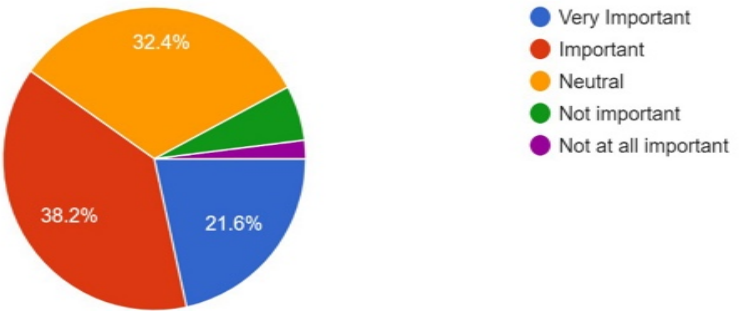
Would you be more inclined to purchase a cosmetic product if it is endorsed by multiple social media influencers?

102 responses



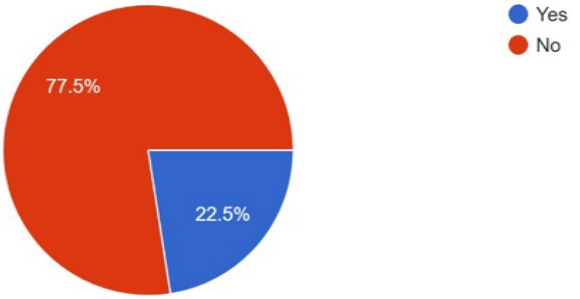
How important is it for social media influencers to have expertise or credibility in the cosmetic field?

102 responses



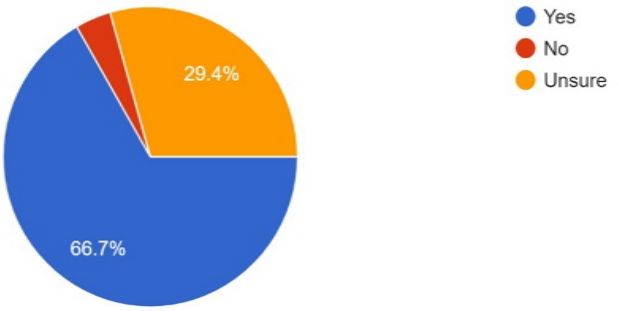
Have you ever tried a cosmetic product solely because it was promoted by a social media influencer, even if you were not initially interested in it?

102 responses



Do you think the involvement of social media influencers has positively impacted the cosmetic industry in India?

102 responses



The survey was conducted with both males and females. Since females use more cosmetic products compared to males, the proportion of female profiles is higher than that of male profiles. This research study contained 102 respondents, and out of these 75 respondents were females, and 27 were male The survey data highlights distinct patterns across age groups regarding engagement with social media influencers and cosmetic content. Young adults aged 15-22 constitute 50% of respondents, showing strong affinity for platforms like Instagram and YouTube, particularly favoring video content. Those aged 25-30 make up about 30%, indicating a similar interest in influencer-driven cosmetic content. Participants aged 31-40 comprise 15%, demonstrating lower engagement. Older respondents (40+) show minimal interest in influencer content. Tailoring influencer marketing to these age-specific preferences is crucial for effective cosmetic campaigns. Based on the survey findings, it is evident

that social media influencers play a significant role in influencing consumer behavior towards cosmetic products. A substantial percentage of respondents engage with influencers regularly, with 12.9% following them daily and 29.7% weekly. Moreover, Instagram emerges as the dominant platform for cosmetic-related content, preferred by 78.2% of participants, followed by YouTube (53.5%) and Facebook (17.8%). Video content proves to be highly effective, preferred by 35.3% of individuals when influencers showcase cosmetic products, while 47.1% appreciate both video and image content equally. This data underscores the influential power of social media platforms and influencer marketing in shaping consumer preferences and purchasing decisions in the cosmetics industry. The survey reveals diverse consumer responses to influencer endorsements in the cosmetic industry. Approximately 29.4% of respondents consistently or frequently research products recommended by influencers, highlighting a proactive approach to purchasing decisions. However, 25.4% rarely or never conduct research, indicating varied trust levels in influencer recommendations. Regarding multiple endorsements, 11.8% are more inclined to purchase products endorsed by several influencers, emphasizing the impact of collective endorsements. Conversely, 20.6% are not swayed by multiple endorsements alone. A significant majority (67.6%) consider the specific influencer endorsing the product before making a purchase decision, underscoring the importance of influencer credibility and alignment with consumer values. A combined 59.8% of respondents find it very important for influencers to possess expertise or credibility in cosmetics, highlighting a significant consumer preference for knowledgeable endorsements. Conversely, a smaller percentage (7.9%) consider this factor unimportant or irrelevant. A significant majority, comprising 59.8%, considers it very important for influencers to possess expertise or credibility in cosmetics. This underscores the importance of credibility in influencing consumer trust and purchasing decisions. Conversely, 38.3% have a neutral or less stringent stance on influencer expertise, indicating a range of perspectives on this issue. Interestingly, 22.5% of respondents admitted trying a cosmetic product solely because it was promoted by an influencer, despite initial disinterest. This suggests the persuasive impact of influencer endorsements on consumer behavior. However, a substantial majority (77.5%) has not been swayed by influencer promotions when initially uninterested in the product. Regarding the broader impact, 66% of respondents believe that social media influencers have

positively influenced the cosmetic industry in India, highlighting their role in shaping consumer trends and brand perceptions. On the other hand, 29.4% hold the view that influencer involvement has not had a positive impact, suggesting varying perceptions of their influence. A small percentage (3.9%) remains unsure about the overall impact of influencers on the industry.

FINDINGS AND CONCLUSION:

The survey findings highlight the nuanced ways in which consumers respond to influencer recommendations in the cosmetic industry. While influencer marketing holds considerable sway over consumer behavior, its impact varies depending on individual research habits and how influencers are perceived in terms of credibility. Brands can capitalize on these insights by strategically partnering with influencers who genuinely connect with their target audience and by delivering clear, informative content that empowers consumers during their decision-making process. This dynamic underscore the intricate relationship between influencer credibility, consumer behavior, and broader industry perceptions. It presents brands with opportunities to effectively harness the influence of credible influencers while navigating and responding to diverse consumer preferences and concerns. By understanding these dynamics, brands can refine their influencer strategies to not only drive engagement and sales but also foster deeper trust and loyalty among their consumer base.

LIMITATIONS AND SCOPE FOR FURTHER STUDY:

One limitation of the study is the potential bias in participant responses, which may affect the authenticity and reliability of the gathered data. Another challenge lies in sample representativeness and self-selection bias, where participants who choose to respond may not accurately represent the broader population. This issue is particularly pronounced in research focusing on social media and influencers, as indicated by the demographics, which predominantly includes younger participants. This demographic skew makes it difficult to generalize findings to older age groups or to the population as a whole. Future research should aim for more diverse participant representation to enhance the validity and generalizability of findings across different age groups and demographic profiles. Furthermore, individuals who choose to participate in the survey may hold differing opinions and perspectives compared to those who do not

participate. Another potential limitation pertains to the scope of response options provided. Moreover, this study is its descriptive nature, which focuses on summarizing and presenting data without delving into causal relationships or deeper analyses. Future research could expand beyond descriptive methods to investigate causal relationships and conduct more in-depth analyses. Overall, there remain numerous aspects within the realm of social media influencers and influencer marketing that warrant further study. It is crucial for future research to address the aforementioned limitations to ensure the reliability and validity of findings.

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ICT AND DEVELOPMENT EXPERIENCE IN INDIA: AN EMPIRICAL ANALYSIS OF ICT AND FINANCIAL INCLUSION

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Abstract

Proper Economic Development cannot be considered without financial inclusion in the economy like India. With the agenda of financial inclusion, the Government of India (RBI) is trying to provide universal access to banking services and improving the forms of credit delivery, especially for the poor and marginalized sections of the population residing in the rural areas. A number of strategies are being used to ensure financial inclusion day by day such as, appropriate relaxations in guidelines, provision of new products, educating the public about financial services, but particular attention is being given to the use of new Information and Communication Technology (ICT) as a means of financial Inclusion under the ICT solution model of RBI. Emergence of Reliance JIO has shown a revolutionary growth in the use of internet facility including rural and remote areas. According to the market research firm Cyber Media Research

(CMR), India had 83 million, or 35%, of the 238 million 4G subscribers coming from rural areas.

In this scenario, the present study is an attempt to examine the role of IC technology in the growth of financial inclusion, with particular analysis of impact of Reliance Jio information and communication technology (ICT). Growth of financial inclusion is measured by growth in electronic banking transactions (based on mobile phones and internet). The analysis is based on the secondary data which has been collected from the website of RBI on monthly basis for the period of 2015–2018. The data has been analyzed with the help of regression models. The finding suggests that introduction Reliance JIO Internet mobile facility has served to advance the goal of financial inclusion in India through encouraging the growth of electronic banking transactions.

Keywords: *financial inclusion, Information and Communication Technology, Reliance JIO Internet mobile.*

INTRODUCTION

In the present scenario of development, Inclusive growth has been a matter of major concern before the policy maker as it has been an essential tool for ensuring the equal development process which is highly required in the case of country like India. It is impossible to think about inclusive growth without access to formal finance at an affordable cost (Kaur 2016, NABARD report 2015, Songu and Moor 2015, Finance Commission Reports 2009). So, Finance being a basic requirement for the development, ensuring financial inclusion in being given high priority for proper inclusive development. According to S. Mundra (2016), 'to address the issue of poverty, financial inclusion is very important means along with an inclusive society. Likewise financial literacy is required to achieve universal financial inclusion'. Focusing on the need of financial inclusion Mago and Chitokwindo (2014) narrated that ensuring financial inclusion is an urgent issue in UDCs, like India, because of the existence of a large number of unbanked people who are also unemployed and low income.

No doubt that the Reserve Bank of India (RBI) has taken several initiatives to push towards universal financial inclusion since last decade such as, advising banks on devising their Financial Inclusion Plan (by a Financial Inclusion Advisory Committee of RBI 2004), sensitizing financially illiterate people through introducing financial literacy programmes and so on. The Committee on Financial Sector Reforms (2005), formed by RBI and ministry of finance, indicated the higher need to ensure financial inclusion at the policy level. It recommended that a new approach to financial inclusion was needed that builds on the lessons of the past. It also suggested that it was required a change in mindset on the part of policymakers, practitioners, and others stakeholders in India to figure out effective ways to provide financial services to the poor.

Apart from reforming the banking system directly, the Reserve Bank has adopted some more oriented policies of providing credit through multiple channels such as, involving self-help groups (SHGs) and microfinance institutions (MFIs) and expanding the scope of the business correspondence (BC) model. The BCs provide banking facilities, particularly cash in-cash out transactions, at a location much closer to the rural population. The banks have been also mandated by RBI to open at least 25 per cent of their new branches in unbanked rural centres with giving high priority to their Financial Inclusion Plans (FIPs).

Among all these efforts, the most important is adaptation of new technological innovations in banking system. The government of India (RBI) has provided all the possible facilities to the banks based on modern Information and communication technology (ICT) with the views that it would act as a bridge between last mile customers and service providers, particularly in rural areas. The emergence of technological innovations has made it very easy to expand the financial services at lower cost. Banks were able to overcome all the barriers of expanding their branches to the remote areas with the usage of information technology. It gives a viable option to reduce transaction cost significantly and create a platform which is user friendly and more convenient toe use.

ICT helps banks to reduce their front-end and back-end cost significantly. Reduced costs lowers the transaction and maintenance costs, which can lower lending cost, and thereby increases the viability of financial inclusion in rural area. For example, The ATMs and online banking are playing a key role in reducing the front-end cost (transaction cost) in comparison to physical cash transaction, and has revolutionized the banking delivery chain in all over the country. The banks are trying to extend online banking services as a preferred mode of transaction for SMEs along with large co-operations. Banks are also using Rural Internet Kiosks in rural areas to carry out such transactions (different annual reports of RBI and NABARD, Bansal, 2014).

Further, to make effective use of ICT, Banks have adopted Core banking solution (CBS), which links all the branches of the banks with each other. It helps customer to operate from any branch regardless of their account in any other branch. It provides door step banking services through Business Correspondents Model wherein the accounts can be operated by even illiterate customers by using biometrics, thus, ensuring the security of transactions and enhancing confidence in the banking system. National electronic fund transfer (NEFT) and Real time gross settlement (RTGS) are two centralize payment system provided by the banks. These two are very significant and convenient payment channel.

Thus a number of series of reforms have been initiated by the government directly or indirectly since the last ten years. The eleventh five year plan was developed with the basic focus area of inclusive growth. Sometimes RBI has taken direct measures to expand the banking services and on the other way, all the government transfers of money to the public, especially of the transfer of the fund of schemes running in the rural areas, are being done through the banks under the direct transfer benefit schemes. An important example is transfer of the wages directly in the accounts of workers in the MNREGA. Thus After so many efforts of the authorities (RBI and Government), the situation of growth in the access to financial services increases by doubling in the duration of 10 years, as in 2001, number of households availing banking services was near about 30.1% (table-1). It increased till 54.4% of household in the census 2011 in rural areas.

Table -1: Position of households availing banking

	As per Census 2001			**As per Census 2011**		
Households types	Total number of households	households availing banking services	Percent	Total number of households	households availing banking services	Percent
Rural	138,271,559	41,639,949	30.1	167,826,730	91,369,805	54.4
Urban	53,692,376	26,590,693	49.5	78,865,937	53,444,983	67.8
Total	**191,963,935**	**68,230,642**	**35.5**	**246,692,667**	**144,814,788**	**58.7**

Source: www.rbi.org.in

Table -2: Number of branches opened Scheduled Commercial Banks (SCBs) during last five years

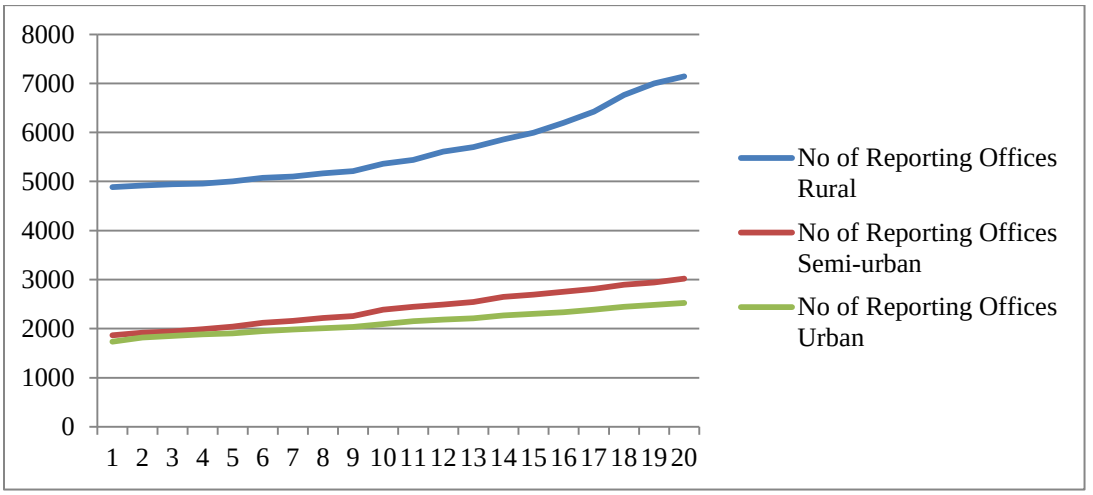
	Number of functioning branches							
	Rural	Gr. rate	Semi Urban	Gr. rate	Urban	Gr. rate	Metropolitan	Gr. rate
31.03.2011	20658		16217		13450		12612	
31.03.2012	22379	8.3	17905	10.4	14322	6.5	13244	5.0
31.03.2013	24243	8.3	19642	9.7	15055	5.1	13797	4.2
31.03.2014	27547	13.6	21952	11.8	16319	8.4	14644	6.1
31.03.2015	29634	7.6	23549	7.3	17387	6.5	15325	4.7
Total growth		37.9		39.1		26.5		20.0

Source: www.rbi.org.in

Table-2 shows the status of growth in number of functioning bank branches India in rural, semi urban, urban and metropolitan areas from March 2011 to March 2015. All the different regions have registered regular growth in establishment of bank branches.

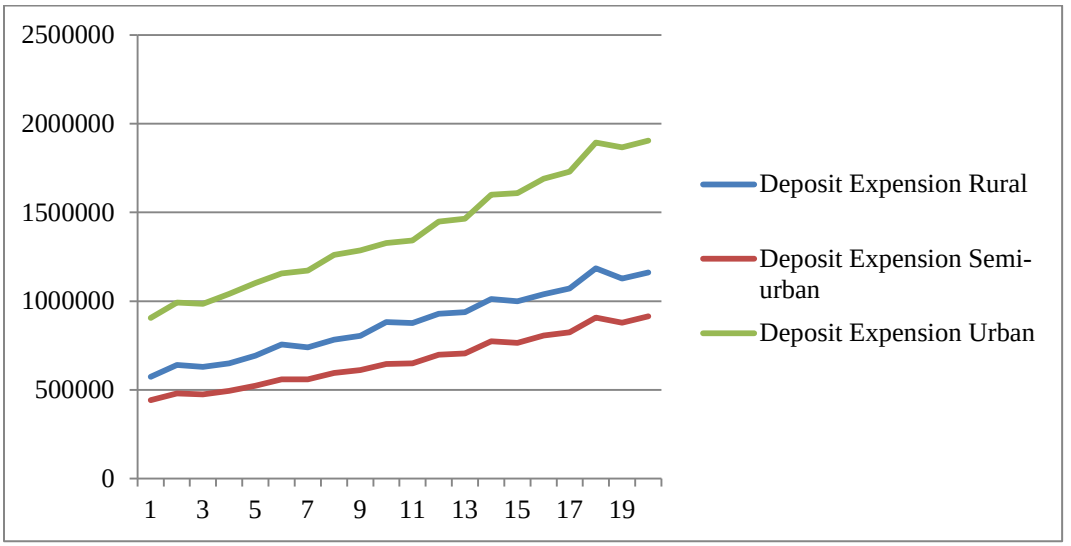
But the growth, especially semi urban (39.1%) followed by rural areas (37.9%) in comparison to urban area. This report indicates progress in the financial inclusion, as most of the excluded people are living in the rural and semi-rural areas.

Figure -1: Population wise trend in the branch expansion of Scheduled Commercial Banks (SCBs) during last five years **(2011-2015)**



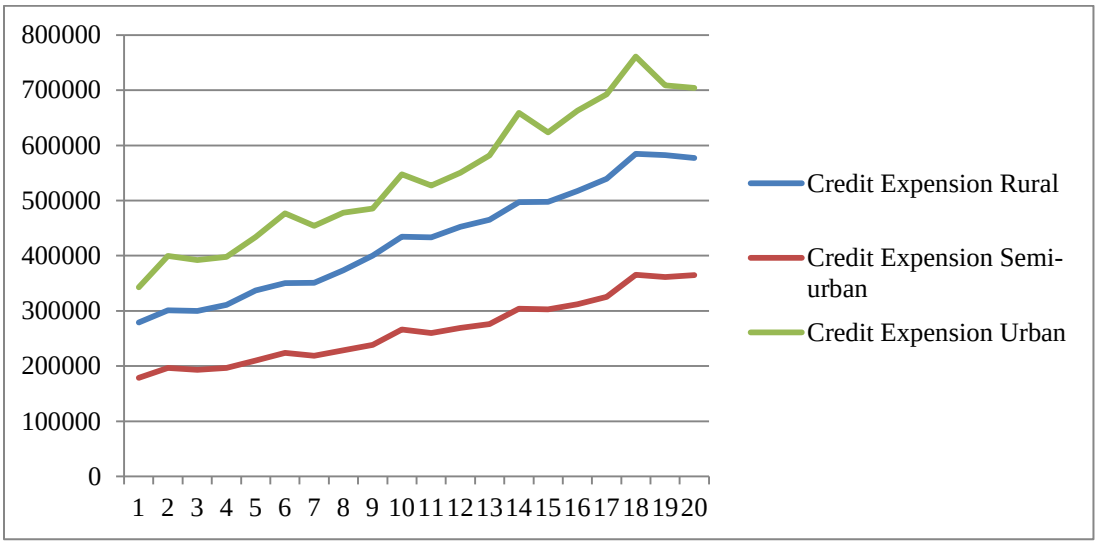
Source: www.rbi.org.in

Figure -2: Population wise trend in the Financial Inclusion deposit expansion of Scheduled Commercial Banks (SCBs) during last five years **(2011-2015)**



Source: www.rbi.org.in

Figure -3: Population wise trend in the Financial Inclusion credit expansion of Scheduled Commercial Banks (SCBs) during last five years **(2011-2015)**



Source: www.rbi.org.in

The trend of growth in Financial Inclusion measured by branch expansion, Deposits and Credits expansion in India, shown in the figure 1, 2 and 3 respectively, suggests that the volume as well as rate of expansion is positive in all areas and for all variables. There is regular growth in the branch expansion, Deposits and Credits expansion in the both rural as well as urban India.

Besides all of these efforts, the progress is still slow. According to the studies regarding financial inclusion, Accessibility of financial services by those in remote areas, often rural areas, has been cited as a major barrier to financial inclusion. On the other side less demand of financial services, particularly by the rural population has inversely affected to the vision of financial Inclusion. For an efficient payment and settlement in term of banking services (study reports suggested). So, Reserve Bank of India (RBI) took a robust initiative as a second phase of the technological advancement. RBI established National Payments Corporation of India (NPCI) with the help of Indian Banks' Association (IBA) for creating a robust Payment & Settlement Infrastructure in India (under the provisions of the Payment and Settlement Systems Act, 2007). It started its proper work in 2013. NPCI, during its

journey in the last seven years, has made a significant impact on the retail payment systems in the country.

Apart from many initiatives of RBI based of modern technology towards payment and settelement system, NCPI has introduced number of instruments based of cashless tracsactions. For example, Implementation of the electronic payment system such as RTGS (Real Time Gross Settlement), Electronic Clearing Service (ECS), Electronic Funds Transfer (NEFT), Cheque Truncation System (CTS), Banking transaction by using Mobile phones etc. a new card payment scheme was launched by the National Payments Corporation of India (NPCI) to offer a domestic, open-loop multilateral system enabled all Indian banks and financial institutions in India to participate in electronic payments. The trend of the growth in the banking transactions based on mobile phone and internet has been predicted by the below figure -4.

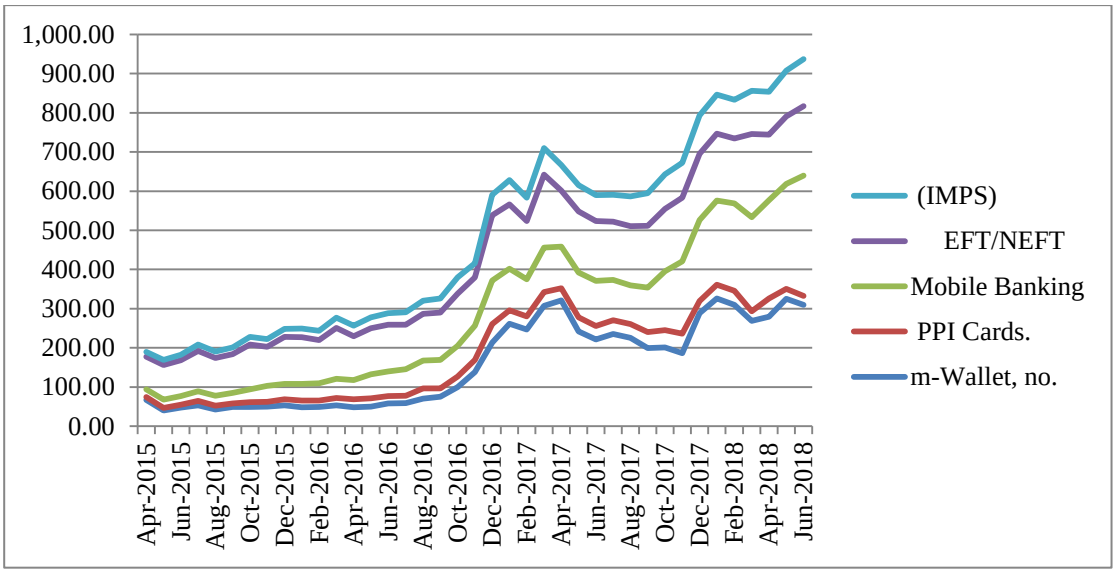
The figure shows the trend of **moods of payment through electronic instruments such as,** NEFT (National electronic funds transfer), IMPS (Immediate payment service), PPI (Prepaid payment, instrument) Cards, M-Wallet and Mobile Banking. The trend analysis shows that the payment and settlement culture through instruments based on mobile an internet is increasing day by day in India but it has shown a drastic change from the last quarter of 2016. This is the period of emergence of Reliance JIO mobile an internet which has provided easy access to the internet and mobile facilities, encouraging awareness about and use of financial services.

About Reliance JIO

Mobile phones and internet are really affecting the lives of billions of people around the globe, including the poor and rural people. The Reliance JIO mobile technology has revealed opportunities and allowed easy access of the people to the Mobile phones and internet, thus facilitating easy access to financial services. Reliance Jio is the only company to have 4G spectrum in 22 zones of India. They have laid 2,50,000+ Kms of high quality fiber optic cable and have installed over 90,000 Eco friendly 4G towers. Jio is using cables of 288 fibers or 96 fibers in most places while other network builders have cables with only 12 to 24 fibers. More fibers mean more bandwidth and more speed. According to the market research firm Cyber Media Research (CMR),

India had 83 million, or 35%, of the 238 million 4G subscribers coming from rural areas, which means every one out of three 4G subscribers in the country come from a rural territory (The Economic Times, April 03, 2018).

Figure 4- trend of mobile based and other electronic transactions with banking system in India



JIO services include unlimited HD voice calls, video calls, unlimited SMS, unlimited high speed data and a host of Jio Premium Apps such as Jio Play, Jio on Demand, Jio Beats, Jio Express News, Jio Drive, Jio Security and Jio Money. It will be not wrong to say that the Reliance Jio will definitely change the world of rural people with its services at such a low cost Reliance Industries is planning to begin a new format of stores called ” Jio Points” in rural areas as well as tier 2 and tier 3 towns in order to increase its retail touch points across the country and specifically in rural areas. In order to reach the masses and increase its sale of products and services, the company is planning to open 50,000 Jio Points by the end of 2018.

Issues to be Research

For faster solution of financial inclusion, The Government of India (RBI) has adopted information and communication technology (ICT) solutions with an anticipation that Modern ICT can act as a tool to develop a platform which helps us to extend the

financial services in remote rural areas. But still the progress is slow because of less internet connectivity. The same problem was concluded by a report of a national saminar on '*cashless economy and financial inclusion- issues and challenges'* organized by department of Economics, University of Allahabad. It was also reported by an executive officer (a mobile infrastructure company of Sunil Mittal-driven Bharti Airtel) that the success of present government's ambitious scheme of Digital India as well as financial inclusion programs lies in making Internet connectivity available in all parts of the country. (Economic times, September 20, 2017). Recently Reliance InfoTech has launched JIO mobile and internet facility proving 4G internet connectivity and smart phones at affordable cost all over the India. In the above scenario, the research problem is that has really Modern ICT provided a better solution for financial inclusion? In addition, has the emergence of JIO mobiles and internet facility imparted a significance impact on growth of financial inclusion process ensuring better access and use of the financial services in India, particularly in remote rural areas?

LITERATURE REVIEW

A vast literature is available which suggested to give high priority to financial inclusion for inclusive (Lakshmi and Reddy 2016, Swamy 2014, Venugopal 2014). Swamy (2014) analyzed the need, significance and the advantages of 'reforms in institutional finance for inclusive growth. He examined effectiveness of Institutional reforms in development finance in making services work for the poor in the context of Indian economy. Analyzing the various data related to the banking sector, he concluded that the institutional reforms in the Indian financial sector should be motivated with the prime objective of making the services work for the poor and enable them to steer out of the chronic poverty.

Technological innovation has been a boon for the banking system. The studies concluded that it would improve the efficiency of financial services in availability and use. It was reported by the government studies that Information and Communication Technology (ICT) solution would be a better way to enusure financial Incluion (several RBI committee reports formed time to time for financial Inclusion). Recently the mobile and internet technology has imparted a revolution in information

technology. The further studies have concluded that Mobile banking has the ability to reach the 'unbanked' sectors of the economy (Klein and Mayer, 2011) but under the condition that there is mobile connectivity. Capturing of this market increases the participants in the financial services sector (Agarwal 2010). mobile banking provides greater financial intermediation of the economy as a whole solving both the demand side as well as supply side problems (Gonzalez-Vega, 2003, Drabu 2009; Altay and Atgur 2010).

Mago and Chitokwindo (2014) examined the impact of mobile banking on financial inclusion in Zimbabwe. The paper adopted a qualitative research methodology and a survey design. The survey was based on the Masvingo district in Zimbabwe. The results revealed that the low income people are willing to adopt mobile banking and the reasons are that it is easily accessible, convenient, cheaper, easy to use and secure. The Committee on Medium-term Path on Financial Inclusion (CMPFI 2015) constituted by Reserve Bank of India submitted its report in December 2015. Among the various recommendations made by the committee, some of the important ones that have been implemented include Registration of mobile numbers through ATMs connected with NFS.

Thus, reliance JIO is providing both mobile and internet facility for last two years and there is no proper study to examine the role of JIO facilities on financial inclusion.

Objectives of the Study

Main objective of the study is to examine the role of new information and communication technology, particularly introduction of Relaince JIO mobile and internet, in the growth of financial inclusion. In other words, to examine whether the reforms have facilitated significant financing to the inclusive growth in India, with special reference to Uttar Pradesh or not, ensuring financial inclusion.

RESEARCH METHODOLOGY

The analysis is based on secondary data. The study is an analysis of impact of reliance JIO on financial Inclusion. In this concern, the independent variable is introduction of Relaince JIO mobile and internet facility. On other side, dependent variable is growth

in banking transactions which are based on mobile and internet connections. There are several banking transactions which are based on mobile and internet connections. In this study, five such instruments are selected as dependent variable for empirical analysis. These are; NEFT – National electronic funds transfer, IMPS – Immediate payment service, PPIC – Prepaid payment instrument card, M-Wallet and Mobile Banking. Data for transaction of these instruments are recorded by RBI wings.

A dummy variable (DUMJIO) is used for the introduction of Relaince JIO mobile and internet facility. The proper use of JIO mobile and internet facility in bulk emerged in the last quarter of 2016. So December 2016 has been selected as the starting month of JIO. The dummy variable is given '0'value before December 2016 and value of '1'after December 2016. Pre and post impact of the JIO technology has been examined with the help of regression analysis. Thus, there are five dependent variables named NEFT, IMPS, m-Wallet, M- Banking and PPIC followed by one independent variable, DUMJIO, a Dummy variable. Brief description of the variables is given below as;

NEFT- number of banking transactions done through ECT/NEFT in Million
IMPS - number of banking transactions done through Immediate Payment Service (IMPS) in Million
m-Wallet - number of banking transactions done through m-Wallet in Million
M-Banking - number of banking transactions done through M-Banking in Million
PPIC - number of banking transactions done through Prepaid Payment Instrument Card (PPIC) in Millions.
DUMJIO - The dummy variable as a proxy of introduction of Reliance JIO.

Data Collection

The nature of data is secondary which is collected from RBI website on the monthly basis. The time period is from April 2015 to March 2018.

About the variables

Immediate Payment Service (IMPS) is an instant payment of electronic fund transfer system in India. It offers an inter-bank electronic fund transfer service through mobile phones. The service is available 24/7 throughout the year including bank holidays.

NEFT allows the customer to transfer fund electronically from any bank branch to customer having an account with any other bank branch in the country. While RTGS allows us to transfer the funds at real time i.e. processing the instruction at the time they receive.

A mobile wallet (m-Wallet) primarily enables an individual to pay as well as receive payment using a mobile device. Typically, a mobile wallet is delivered through several payment processing models. This includes, but not limited to: Mobile-based billing, SMS-based transactions, and Mobile web payments.

DATA ANALYSIS

Table-3: Result of Unit Root Test (ADF test model)

Variables	Para. Estimates	t-value	p-value	Stationarity
m-Wallet	-0.2713	-2.5789	0.290	no
D_1m-Wallet	-1.0312	-4.7202	0.00	yes
PPIC	-0.2967	-1.2841	0.890	no
D_1PPIC	-2.002	-5.888	0.00	yes
M- Banking	0.0010	0.0140	1.00	no
D_1M- Banking	-0.8020	-3.59	0.03	yes
NEFT	-0.7901	-3.2398	0.08	no
D_1 NEFT	-2.27	-7.80	0.00	yes
IMPS	-0.1383	-1.522	0.82	no
D_1IMPS	-1.567	-5.444	0.00	yes

Source: Author's calculation

The result of unit root test is tabulated in the table (3) and it shows that the data series of all variables are non-stationary for their level but becomes stationary after taking first difference.

Table-4: Impact of Reliance JIO (mobiles and internet facility) on the growth of Mobile banking in India

Dependent variable: Y = M-Banking

Ind. Variables	Parameter Estimates	t-value	p-value	Sign.
DUMJIO	0.43102	2.510	0.0120	Yes
L_1M-Banking	7.221	2.398	0.016	Yes

Source: Author's calculation

The table- 4 shows that according to the p-value, the Dummy variable (DUMJIO) is a significant variable in affecting the M-banking (p- value = 0.012). Interpretation is that Reliance JIO (mobiles and internet facility) has significantly affected the growth in the use of mobile banking in India. However, the growth in the use of mobile banking has been also significantly affected by its own past records, as lag 1 of m-banking (L_1M-Banking) is significant. The result suggests that use of mobile culture is increasing as use of one person is also encouraging the person to use it.

Table-5: Impact of Reliance JIO (mobiles and internet facility) on the growth of PPI Cards Payments **in India**

Dependent variable: Y = PPIC

Ind. Variables	Parameter Estimates	t-value	p-value	Sign.
L_1PPIC	-0.47047	-0.47317	0.0016	yes
DUMJIO	-0.47317	-0.298	0.76	no

Source: Author's calculation

The table-5 shows that, according to the p-value, the Dummy variable (DUMJIO) is not a significant variable in affecting the PPIC (p- value = 0.72). Interpretation is that Reliance JIO (mobiles and internet facility) has not significant effect on the growth in

the use of PPI cards in India. However, the growth in the use of mobile banking has been significantly affected by its own past records, as p-value of L_1PPIC is 0.001. The negative sign of its beta (-0.47317) of the dummy variable suggests that the emergence JIO has discouraged card type payments by encouraging electronic transactions.

Table-6: Impact of Reliance JIO (mobiles and internet facility) on the growth of IMPS Payments **in India**

Dependent variable: Y = IMPS

Ind. Variables	Parameter Estimates	t-value	p-value	Sign. Level
L_1IMPS	-0.28415	-1.863	0.06244	no
DUMJIO	5.552	5.185	0.0000	yes

Source: Author's calculation

The table - 6 shows that according to the p-value, the Dummy variable (DUMJIO) has significantly affected the IMPS (p- value = 0.00). It means that the Reliance JIO (mobiles and internet facility) has significantly affected the growth in the use of electronic payment through IMPS in India. However, the growth in the use of IMPS has been also significantly affected by its own past records, as its lag 1 (L_1IMPS) is significant.

Table-7: Impact of Reliance JIO (mobiles and internet facility) on the growth of m-Wallet Payments **in India**

Dependent variable: Y = m-Wallet

Ind. Variables	Parameter Estimates	t-value	p-value	Sign. Level
L_1m-Wallet	0.84764	9.142	0.000	yes
DUMJIO	47.503	1.940	0.052	yes

Source: Author's calculation

The table-7 shows that, according to the p-value, the Dummy variable (DUMJIO) is a significant variable in affecting the M-banking (p- value = 0.012) suggesting that Reliance JIO (mobiles and internet facility) has significantly affected the growth in the

use of mobile Wallets in India. However, the growth in the use of mobile banking has been also significantly affected by its own past records, as its lag 1 (L_1m-Wallet) is significant.

Table-8: Impact of Reliance JIO (mobiles and internet facility) on the growth of NEFT Payments **in India**

Dependent variable: Y = NEFT

Ind. Variables	Parameter Estimates	t-value	p-value	Sign. Level
L_1NEFT	-0.5956	-4.408	0.00001	yes
DUMJIO	4.0918	1.194	0.2324	NO

Source: Author's calculation

The table-8 shows that the Dummy variable (DUMJIO) is a significant variable in affecting the NEFT (as p- value = 023). Interpretation is that Reliance JIO (mobiles and internet facility) has no significant impact on the growth NEFT in India. However, the positive sign of beta (4.09) suggests that there exist positive impact of the JIO on the growth of NEFT culture. NEFT has been significantly affected by its own past records but negative sign of beta suggests that NEFT culture has no contribution in encouraging the NEFT. There may be some other important variables such as truncation cost, etc.

Overall, the result of empirical analysis suggests that the emergence of Reliance JIO (mobiles and internet facility) has a significant impact on the growth of electronic banking transaction which is based of on mobile phones and internet. It also suggests that card (digital) culture has a declined trend due introduction of Reliance JIO (mobiles and internet facility). Another important finding is that the electronic payment culture has also significant contribution in the growth electronic banking transaction.

CONCLUSION AND SUGGESTIONS

The financial sector reform is highly based on the modern technology to ensure financial inclusion. Recently Reliance JIO has generated a boom in information and

communication technology. This study examines the role of information and communication technology (ICT) in the growth of financial inclusion, with particular analysis of impact of Reliance JIO information and communication technology (ICT). The independent variable is introduction of Relaince JIO mobile and internet facility. On other side, dependent variable is growth in banking transactions which are based on mobile and internet connections. A dummy variable (DUMJIO) is used for the introduction of Relaince JIO mobile and internet facility emerged in the last quarter of 2016. So December 2016 has been selected as the starting month of JIO.

The finding of empirical analysis suggests that the emergence of Reliance JIO (mobiles and internet facility) has a significant impact on the growth of electronic banking transaction which is based of on mobile phones and internet. The very much supportive result is that the card (even digital) culture has a declined trend due introduction of Reliance JIO (mobiles and internet facility). It means the people are able and desired to adopt new technology but the access of these facilities is a major constraint. Another important finding is that the electronic payment culture has also significant contribution in the growth electronic banking transaction. Thus the study concludes that introduction JIO Internet mobile facility has served to advance the goal of financial inclusion in India through encouraging the growth of electronic banking transactions. It is suggested on the basis of the finding of this study that the government should adopt the information and communication technology as a major means of expanding the financial services to the poor and rural people. This practice would be the best solution for financial inclusion.

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THE INDIAN RETAIL LANDSCAPE: THE EFFECT OF FOREIGN DIRECT INVESTMENT (FDI) LIBERALISATION.

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Abstract

This study investigates the impact of liberalising Foreign Direct Investment (FDI) on the retail industry in India. Through the analysis of regulatory changes, economic data, and case studies, the research aims to gain a comprehensive understanding of how growing foreign investment has transformed the retail industry in India. It specifically focuses on important factors such as FDI inflows in retail sector, employment patterns, and the revenue growth of domestic and international shops, consumer behaviour, and market share dynamics. These observations will aid in comprehending the wider economic impact of FDI liberalisation and the changing retail environment in India.

Keywords: *Retail sector; FDI; Indian economy; trade liberalisation; customer behavior.*

INTRODUCTION

Retailing plays a vital role as a middleman between manufacturers and customers in modern market economies. In order to cultivate a robust connection between the two parties, shops not only supply a diverse range of items but also offer supplementary services. These services, together with the wide range of products available, contribute to a pleasing and simple shopping experience for consumers. The retail industry is considered a crucial cornerstone of the Indian economy, seeing significant and impressive expansion. India's retail industry is known for its large number of retail establishments.

Since the implementation of more relaxed regulations regarding FDI in the early 1990s, the Indian economy has welcomed a large number of multinational companies (MNCs), therefore facilitating substantial inflows of international capital. The objective of this policy change was to promote economic expansion by attracting significant investments, cutting-edge technology, and international corporate standards. The liberalization has not only improved the retail sector's infrastructure and efficiency, but it has also fostered competition, resulting in benefits for customers such as higher-quality items and services at competitive prices. Furthermore, the increase in foreign investment has played a significant role in generating employment opportunities, enhancing skills, and fostering general economic growth, establishing India as an attractive prospect for future international investments. The expectation of ongoing outside investment highlights the possibility of long-lasting expansion and modernization in India's retail industry, positioning it as a vibrant and essential part of the country's economic framework.

The Indian retail market is a rapidly expanding industry in the country, making a substantial contribution to the overall national economy. The IBEF estimates the retail industry in India to be worth over USD 1.2 trillion in 2023 and expects it to expand at a compound annual growth rate (CAGR) of 10% to reach USD 1.75 trillion by 2026. We primarily categorize the sector into organised and unorganised divisions. Despite

significant development in organised retail, the majority of the industry remains unorganised, with vendors, street markets, small independent businesses, mom-and-pop stores, and roadside hawkers conducting 88% of retail operations (KPMG, 2023). Organised retail, which includes licensed shops such as hypermarkets, supermarkets, retail chains, and megastores, accounts for only 12% of the total market. This figure is considerably lower in comparison to industrialised nations like the USA, where organised retail makes up around 85% of the market (Deloitte, 2023). India's organised retail industry is projected to experience significant growth as a result of urbanisation, more disposable incomes, and evolving customer tastes.

The Indian retail industry experienced a significant shift with the liberalisation FDI rules in the early 1990s. These changes facilitated the entry of multinational companies (MNCs) into the Indian market, resulting in substantial inflows of foreign capital. The government's continuous endeavours to liberalise the retail sector have led to heightened competitiveness among local firms, facilitated access to global retail formats, and brought about advancements in technology and managerial methods.

Furthermore, the industry has experienced significant technical progress and digital conversion, fueled by the widespread use of smartphones and internet access. E-commerce has become an essential part of the retail industry, contributing to the rapid expansion of organized retail. According to PwC (2019), companies like Amazon, Flipkart, and Reliance Retail are at the forefront of the digital retail revolution. They provide consumers with a diverse range of products and services at reasonable pricing. Advantageous government measures aimed at improving infrastructure, simplifying regulatory structures, and fostering a business-friendly environment further bolster the expansion of the retail industry. Initiatives like the Goods and Services Tax (GST), the establishment of retail parks, and investments in logistics and supply chain infrastructure have significantly improved the operational efficiency of the retail sector (Ernst & Young, 2020).

India’s Liberalisation of FDI

The deregulation of FDI in India has been a crucial element of the country's economic reforms since the early 1990s. In response to a serious balance of payments crisis, the

Indian government implemented the New Industrial Policy in 1991. This policy consisted of substantial economic changes designed to encourage foreign investments, decrease trade obstacles, deregulate industries, and liberalise foreign direct investment policies. These changes were intended to facilitate the integration of the Indian economy into the global market, thereby stimulating economic growth.

India has gradually eased restrictions on FDI in many industries such as manufacturing, retail, telecommunications, and infrastructure during the last thirty years. In 2023, India received a significant amount of USD 81.72 billion in FDI, which demonstrates the trust and interest of international investors in the Indian market (Department for Promotion of Industry and Internal Trade [DPIIT], 2023). Industries such as information technology, telecommunications, and e-commerce have greatly profited from these attempts to promote liberalisation, experiencing significant inflows of foreign capital. The infusion of money has resulted in the establishment of top-tier infrastructure and the generation of a substantial number of employment opportunities, hence stimulating economic expansion.

In 2006, the implementation of a policy allowing 100% FDI in single-brand retail was an important achievement in the liberalization of FDI. In 2012, certain criteria led to the expansion of this policy to include multi-brand retail. The legislative modification allowed international powerhouses such as IKEA, Walmart, and Amazon to enter the Indian retail industry, resulting in heightened competition, superior product quality, and improved consumer satisfaction (Ernst & Young, 2019). These global firms have also transmitted cutting-edge technology and optimal methodologies to the Indian market. In addition, the Indian government has taken several steps to shorten the clearance process for FDI and enhance the convenience of conducting business. The implementation of the automated route for FDI in most industries has greatly diminished bureaucratic obstacles and expedited approval procedures. The Digital India programme, aiming to enhance digital infrastructure and broaden internet access across the country, has further strengthened this.

The advent of GST in 2017 has brought about structural reforms that have unified the national market and made the tax regime simpler. The implementation of GST has

streamlined the taxation system by replacing many indirect taxes with a unified tax. This has facilitated seamless corporate operations across state boundaries and reduced corporations' total tax burden. This change has been essential in enhancing India's appeal as a profitable hub for international investment.

FDI liberalisation has effects that go beyond only economic development and investment inflows. Furthermore, it has resulted in the transfer of technology, the enhancement of skills, and the generation of employment, all of which contribute to the overall progress of the Indian economy. Indian corporations have been able to establish strategic partnerships with international enterprises, improving their competitiveness in the global market due to the implementation of liberalisation policies (Deloitte, 2021). For instance, collaborative partnerships between Indian and international corporations have enabled the implementation of cutting-edge products and services, resulting in advantages for customers and enhancing the economic vitality of the nation. Additionally, the influx of FDI has had a beneficial effect on the balance of payments by offering a reliable means of external funding. This has helped to stabilize the Indian rupee and maintain foreign exchange reserves at acceptable levels. In addition, the government has prioritized enhancing the investment environment by safeguarding intellectual property rights and ensuring contract enforcement, both of which are critical in attracting sustainable investments.

Overall, the liberalisation of FDI in India has played a crucial role in reshaping the country's economic environment. These changes have laid the groundwork for long-term economic growth by attracting international investments, easing technology transfer, and boosting skills development. India's ongoing economic liberalisation and efforts to enhance its business climate position it to attract higher levels of foreign investment, hence accelerating its development and absorption into the global economy.

This paper presents a thorough examination of the changes that occurred in the Indian retail industry between 2014 and 2023. It specifically focuses on important factors such as FDI inflows in retail sector, employment patterns, and the revenue growth of domestic and international shops, consumer behaviour, and market share dynamics.

This study investigates the impact of FDI liberalisation on job creation and employment trends in the retail industry. This report quantifies the amount and rate of FDI coming into a country, emphasising the changes in policies and important factors that contribute to these investments. In order to determine the elements influencing their success, the study also contrasts the revenue growth trends of both national and global retailers. Analysing consumer behaviour data allows for a comprehensive understanding of shifts in tastes, buying patterns, and the influence of online commerce. Ultimately, the study assesses the market dominance of different retail forms, offering valuable insights on the acceptance and expansion of structured and unstructured retail. This analysis aims to clarify the wider economic effects of FDI liberalisation and the changing retail industry in India.

LITERATURE REVIEW

Wang et al. (2023) examine the relationship between FDI inflows and income inequality within the context of Schumpeterian economic growth theory. The study identifies multiple channels—such as technology transfer, human capital development, and competition—through which FDI can impact income distribution, suggesting that FDI's influence on inequality is multifaceted. . Zamani and Tayebi (2022) focus on the Economic Cooperation Organization (ECO) member countries to analyze the effects of international trade and FDI as channels for technology transfer. Their empirical results suggest that both trade and FDI have significantly positive spillover effects on economic growth, thereby supporting sustainable development in the long term. Hong et al. (2021) conduct a meta-analysis to assess the impact of FDI on entrepreneurial activities. Their findings indicate that FDI positively contributes to innovation, job creation, and economic growth in host countries, highlighting the role of FDI in fostering entrepreneurship. Dhrifi, Jaziri, and Alnahdi (2020) explore the influence of foreign direct investment (FDI) on poverty reduction in developing countries, concluding that FDI plays a significant role in alleviating poverty levels. This finding underscores the potential of FDI as a tool for economic development in these regions. In their analysis of the Indian economy, Jana, Sahu, and Pandey (2020) investigate the dynamic relationship between FDI and foreign trade growth. Utilizing a time-varying parameter model with vector autoregressive specifications, the study reveals a strong long-term co-movement between the two variables. It is found that foreign trade exerts

a unidirectional influence on FDI in the long run, while a bidirectional causality exists in the short run.

Koerner, Borrs, and Eppelsheimer (2023) examine the effects of foreign direct investment (FDI) on job stability within multinational corporations. Their findings indicate that FDI positively influences job stability by creating opportunities for skill enhancement and career progression, although it may also result in workforce adjustments such as upgrades, downgrades, and separations. Additionally, the study suggests that FDI contributes to job stability in onshore operations by facilitating skill development within multinational enterprises. Rana and Ali (2022) explore the relationship between technology and FDI in India, identifying technology as a key driver of FDI inflows. Their study reveals a reciprocal relationship between technology and employment, with technology significantly influencing both employment generation and the growth of self-employment and entrepreneurship across various sectors of the Indian economy. The authors argue that FDI, facilitated by technological advancements, promotes trade liberalization and economic development. Baranwal (2019) investigates the demand-side effects of FDI on the labor market, particularly its role in increasing wage inequality in the host country. The study confirms the positive association between FDI and wage inequality, consistent with existing literature. To ensure the robustness of the results, the research incorporates external instruments such as market size, infrastructure, proximity to major markets, and indices measuring religion and caste fractionalization. Cai, Chen, and Fang (2018) introduce a semiparametric quantile panel data model to estimate the growth effects of FDI. Their analysis provides a nuanced understanding of the relationship between FDI and economic growth by considering different quantiles, thereby underscoring the importance of heterogeneity in assessing the impact of FDI on growth. Beladi, Dutta, and Kar (2016) investigate the impact of FDI on the organized and unorganized sectors in India. Their results suggest that FDI in the organized sector may lead to increased outsourcing to the unorganized sector due to the competitive pressures faced by organized firms, potentially resulting in higher labor costs. The study also highlights that FDI, through technology spillovers, significantly enhances the gross value added in industries within the informal sector,

demonstrating the positive influence of international capital flows on the unorganized economy.

Aktaş and Gattai (2023) focus on the dual role of both inward and outward foreign direct investment (FDI) in India, positioning the country as a key player in global FDI flows. By adopting a firm-level perspective, their study examines the impact of FDI on firm performance in India, offering valuable insights into the relationship between FDI and firm-level productivity and growth. This research enhances the understanding of how FDI influences the performance of firms within the Indian economy. Rana and Ali (2022) explore the interplay between technology and foreign direct investment (FDI) in India, identifying technology as a crucial driver of FDI inflows that subsequently facilitates trade liberalization. Their study reveals a direct, reciprocal relationship between technology and employment, emphasizing the significant role that technological advancements play in generating employment and fostering self-employment and entrepreneurship across various sectors of the Indian economy. This dynamic underscores the critical impact of technology on economic development and workforce expansion in India. Sun, Lee, and Hong (2017) investigate the spillover effects of foreign direct investment (FDI) in both low-tech and high-tech industries in India. Their findings indicate that in the low-tech sector, FDI spillovers are predominantly positive and significant across various intra- and inter-regional as well as intra- and inter-sectoral channels. Conversely, in the high-tech sector, FDI spillovers are mainly intra-sectoral within the host region and neighboring regions, following a statistically significant inverted 'U'-shaped curvilinear trend. This suggests that while the impact of FDI initially increases, it eventually diminishes as the industry reaches maturity.

Saxena (2014) highlights the significant advantages that foreign direct investment (FDI) offers to domestic industries and consumers in India. These benefits include technological advancement, access to global managerial expertise, and the optimal use of human and natural resources. FDI also plays a critical role in enhancing the international competitiveness of Indian industries, opening export markets, and establishing backward and forward linkages. Additionally, Saxena underscores the importance of foreign capital in driving India's economic growth, boosting local firm

performance, and aiding in the globalization of Indian companies, thereby elevating the country's status among developing nations. Chari and Madhav Raghavan (2012) discuss the restricted access of India's retail market to large international retailers, such as Wal-Mart and Carrefour, due to opposition to liberalizing foreign direct investment (FDI) in the sector. The authors argue that allowing these global retailers to enter the Indian market could address several economic challenges, including mitigating inflation, improving supply chain efficiency, enhancing price signals for farmers, and boosting agricultural and other exports. The potential benefits of opening the retail sector to FDI, as outlined by the authors, suggest significant economic gains for the country.

RESEARCH METHODOLOGY

This study uses a descriptive statistical approach to analyze the trends and patterns of Foreign Direct Investment (FDI) in India's retail sector. The research is based on data collected from various sources, including the India Brand Equity Foundation (IBEF), the Department for Promotion of Industry and Internal Trade (DPIIT), the Reserve Bank of India (RBI), local organizations like PwC, Ernst & Young (EY), and Technopak, and the World Investment Reports produced by the United Nations Conference on Trade and Development (UNCTAD). The World Trade Organisation (WTO) also conducts comprehensive assessments of global trade and investment patterns, including the impact of retail sector liberalization on trade dynamics.

The study aims to assess employment patterns and the influence of FDI on job creation, examine the magnitude and growth of FDI inflows, compare revenue expansion of domestic and international retailers, evaluate the geographical distribution of FDI, analyze shifts in consumer behavior, and assess the allocation of market share between organized and unorganised retail formats. This methodology provides a comprehensive understanding of the impact of FDI on the retail sector in India, laying the foundation for further study and policy formulation.

ANALYSIS & FINDINGS

Table-1 FDI inflow into the Indian Retail Sector

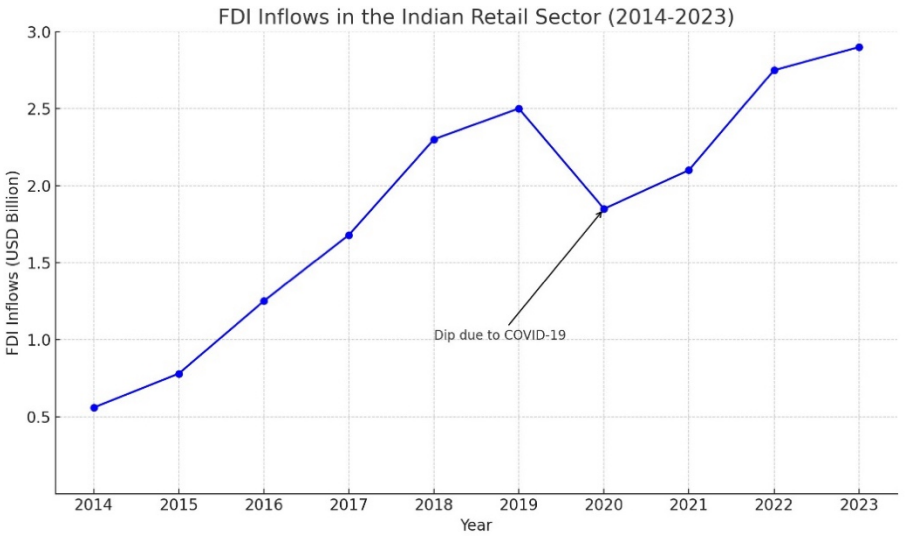
Year	FDI Inflows (USD Billion)
2014	0.56
2015	0.78
2016	1.25
2017	1.68
2018	2.30
2019	2.50
2020	1.85
2021	2.10
2022	2.75
2023*	2.90

Source: Compiled from various credible sources, including reports from IBEF, DPIIT, RBI.

The table-1 displays the yearly FDI inflows into India's retail sector spanning from 2014 to 2023. The data indicates a conspicuous upward trajectory, with FDI inflows steadily rising each year, except for a little decline in 2020 as a result of the economic disruptions caused by the COVID-19 epidemic. The projected FDI inflows for the year 2023 suggest that the existing pattern of growth will continue. The data indicates a significant rise in FDI into India's retail industry throughout the past decade. In 2014, the amount of FDI that came into the country was USD 0.56 billion. By 2023, this amount had climbed to USD 2.90 billion.

We can attribute the observed development to the increasing appeal of the Indian retail sector to foreign investors, primarily due to the relaxation of FDI regulations and the expansion of the customer base. The data and graph-1 indicates a significant increase in FDI into the Indian retail sector over the past decade. The FDI inflows had significant growth, rising from USD 0.56 billion in 2014 to USD 2.90 billion in 2023.

More lenient foreign direct investment regulations and a growing customer population have made the Indian retail business increasingly attractive to overseas investors, contributing to the observed development.



Graph 1 FDI inflow into the Indian Retail Sector

Table-2 Employment in Indian Retail Sector

Year	Employment (Millions)
2014	35.0
2015	36.5
2016	38.0
2017	39.5
2018	41.0
2019	42.5
2020	41.0
2021	42.0
2022	44.0
2023*	45.5

Source: Compiled from various credible sources, including reports from IBEF, DPIIT.

Table 2 presents the anticipated employment statistics in the Indian retail sector from 2014 to 2023. The data indicates a steady and continuous increase in employment figures throughout the decade, with a little decrease in 2020 as a result of the COVID-19 pandemic. The employment statistics exhibited a resurgence in 2021 and sustained a steady increasing trajectory, with a projected increase anticipated in 2023.

The liberalisation of FDI rules has had a substantial effect on employment in the retail industry. The influx of foreign capital has led to the establishment of new retail establishments, supermarkets, hypermarkets, and e-commerce platforms, creating numerous job opportunities. In addition, these expenditures have introduced improved training and development programmes, resulting in a higher standards of employment in the sector. From 2014 to 2023, the employment data indicates a steady increase in the number of individuals employed in the Indian retail business. In 2014, the sector employed more than 35 million people, and it is projected to grow to over 45.5 million by 2023.

Graph 2 depicts a robust recovery and growth in employment figures from 2021 to 2023. The projected employment outlook for 2023 is 45.5 million, signifying continuous growth in the business. This rise is driven by the growing urban population, increased levels of disposable income, and the transition to digitization in the retail industry. The transformation has led to the establishment of novel job roles in the fields of logistics, customer service, and technology.

Graph 2 Employment in Indian Retail Sector

Table 3: Revenue Growth of Domestic vs Foreign Retailers

Year	Domestic Retailers Revenue (USD Billion)	Foreign Retailers Revenue (USD Billion)
2014	180	40
2015	190	45
2016	205	55
2017	220	70
2018	240	85
2019	260	95
2020	250	90
2021	270	100
2022	290	115
2023*	310	130

Source: Compiled from various credible sources, including reports from IBEF, DPIIT.

Table 3 presents the annual income figures for local and international merchants in the Indian retail sector from 2014 to 2023. The data shows a consistent and upward trend

in revenue for both local and international merchants, with foreign shops experiencing a higher rate of growth. The income figures for 2023 are approximations based on observed trends throughout the first three quarters of the year.

Both domestic and foreign merchants have witnessed significant growth in their earnings during the past decade. Domestic merchants' revenues rose from USD 180 billion in 2014 to an expected USD 310 billion in 2023. During the same period, foreign merchants' revenue increased from USD 40 billion to approximately USD 130 billion. Home merchants have consistently expanded their businesses by leveraging their extensive knowledge of the home market and client preferences. Their sales saw an increase from USD 180 billion in 2014 to an approximate USD 310 billion in 2023, demonstrating a compound annual growth rate (CAGR) of around 5.5%. The foreign merchants' revenue has experienced significant growth, increasing from USD 40 billion in 2014 to an expected USD 130 billion in 2023. This figure corresponds to a compound annual growth rate (CAGR) of around 13.3%. The influential global retail firms, their advanced retail tactics, and significant financial investments are responsible for the rapid development.

Graph 3 illustrates from 2021 to 2023, there is a significant resurgence and growth in revenue for both local and global retailers. The projected statistics for 2023 indicate consistent growth, supported by increasing consumer demand, advancements in digitization, and ongoing legislative support.

Graph 3 Revenue Growth of Domestic vs Foreign Retailers

Table-4 Consumer Spending and Trends in Retail Formats

Year	Consumer Spending (USD billion)	Traditional Retail (%)	Supermarkets (%)	Hypermarkets (%)	Online Retail (%)	Consumption Pattern Change (%)
2014	500	60	15	10	15	5
2015	520	58	16	11	15	6
2016	550	55	17	12	16	7
2017	580	52	18	13	17	8
2018	620	50	19	14	17	9
2019	650	48	20	15	17	10
2020	700	45	22	16	17	12
2021	750	42	24	17	17	14
2022	800	40	26	18	16	16
2023	850	38	28	20	14	18

Source: Compiled from various credible sources, including reports from IBEF, DPIIT.

The consumer expenditure in India has exhibited robust development over the past decade, surging from USD 500 billion in 2014 to an expected USD 850 billion in 2023, as stated in Table 4. This increase is a clear indication of a widespread surge in consumer purchasing ability and economic expansion. In this century, the retail business has seen substantial transformations, marked by a change in client preferences and purchasing patterns.

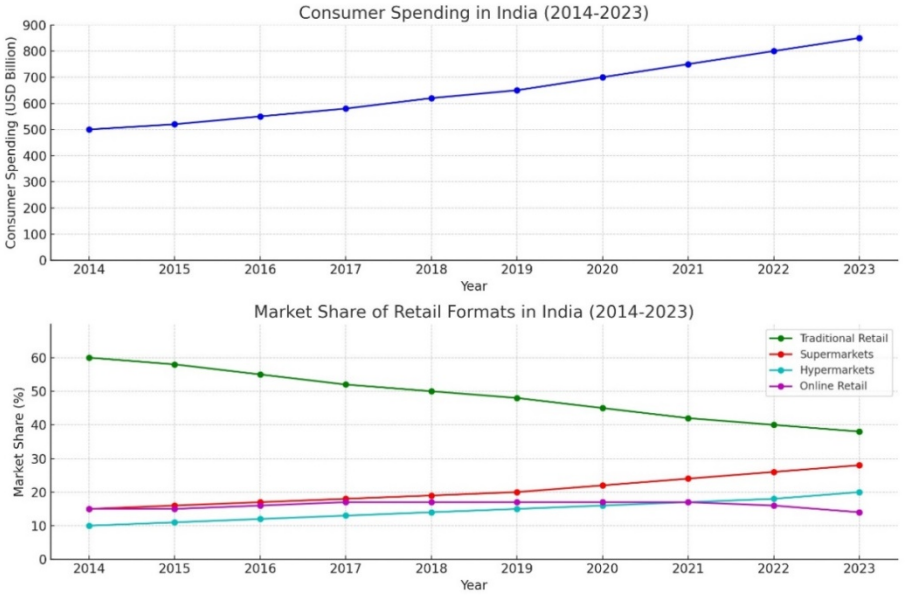
In 2014, traditional retail had the largest share of the market, with 60% of consumer spending. However, the proportion of this share has continually declined, reaching 38% by 2023. This decline highlights the steady shift from conventional retail formats to more contemporary retail options. The market dominance of supermarkets and hypermarkets has experienced substantial growth, increasing from 25% in 2014 to 48% in 2023. Growing urbanisation, rising middle-class wealth, and changing

consumer preferences for more organised and efficient shopping experiences have contributed to this trend.

Supermarkets have experienced significant market dominance expansion, rising from 15% to 28% over a ten-year period. The rising trend suggests that consumers are gradually showing a preference for supermarkets as a result of their enhanced product assortment and superior quality. Hypermarkets have experienced significant growth, doubling their market share from 10% to 20%. This trend reflects consumers' preference for convenient shopping venues that offer a wide range of things in one place.

From 2021 to 2023, the online retail industry maintained a continuous market share of about 15-17%. However, it experienced a slight decline, reaching 14% by 2023. We can attribute the slight decline to the normalisation of consumer purchasing patterns following the pandemic and the resumption of in-person commerce, which led to a more balanced distribution between online and offline retail forms. However, the enduring segment of e-commerce displays its firmly established role in the consumer buying journey, driven by the ease of home delivery and the growing preference for digital payment options.

Graph 4 depicts a consistent increase in the percentage of change in consumption habits, starting at 5% in 2014 and reaching 18% in 2023. This metric quantifies the speed at which customers are altering their buying patterns and preferences. Technological advancements, enhanced retail infrastructure, and evolving client preferences influence the dynamic character of the Indian retail industry, as evidenced by its increasing growth rate.



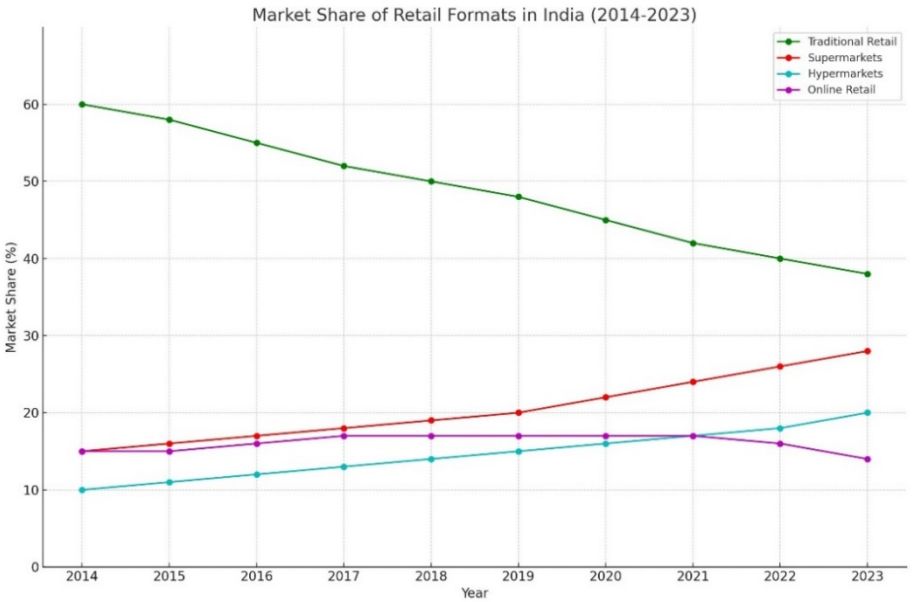
Graph 4 Consumer Spending and Trends in Retail Formats

Table-5 Market Share of Retail Formats

Year	Traditional Retail (%)	Supermarkets (%)	Hypermarkets (%)	Online Retail (%)
2014	60	15	10	15
2015	58	16	11	15
2016	55	17	12	16
2017	52	18	13	17
2018	50	19	14	17
2019	48	20	15	17
2020	45	22	16	17
2021	42	24	17	17
2022	40	26	18	16
2023	38	28	20	14

Source: Compiled from various credible sources, including reports from IBEF, DPIIT.

The conventional retail model in India has seen a significant shift in consumer buying patterns, with traditional retail accounting for 60% of the market share in 2014 as shown in table 5. We expect this shift to persist, resulting in a further decline to 38% by 2023. Supermarkets have seen a significant increase in market share, from 15% in 2014 to 28% in 2023, due to their focus on enhanced shopping experiences, convenience, and a wide range of products. Hypermarkets have also seen a significant increase, from 10% in 2014 to 20% in 2023, offering a quick shopping experience with a diverse range of products. The e-commerce industry has also seen significant growth, with market dominance increasing from 15% in 2014 to 17% in 2017-2021. However, we expect this trend to decline to 14% by 2023, as the pandemic has homogenized consumer buying patterns. The graph 5 illustrates a shift from conventional to structured retail formats reflects the changing consumer landscape in India, driven by factors such as urban expansion, disposable income, infrastructure, and technological advancements.



Graph 5 Market Share of Retail Formats

DISCUSSION & CONCLUSION

The deregulation of FDI in India's retail industry has resulted in substantial changes in the last ten years, affecting employment, revenue expansion, consumer patterns, and market dynamics. Between 2014 and 2023, the amount of FDI coming into the country

has consistently increased, going up from USD 0.56 billion to an estimated USD 2.90 billion. The implementation of more relaxed FDI laws and the growing appeal of the Indian retail sector to international investors may have contributed to the increase in FDI. The influx of foreign money has not only improved retail infrastructure but also stimulated competition, resulting in customers gaining access to superior products and services at competitive costs.

The retail industry has seen a significant increase in employment, with the number of workers rising from 35 million in 2014 to an estimated 45.5 million in 2023. The expansion of structured retail formats and the construction of new retail locations, supermarkets, hypermarkets, and e-commerce platforms propel this increase. The increase in FDI has led to improved training and development initiatives, resulting in higher industry employment standards.

The analysis of revenue growth trends indicates that both local and international retailers have witnessed substantial gains, with foreign merchants obtaining a superior growth rate. Within the same time frame, domestic retailers' revenues increased from USD 180 billion to an estimated USD 310 billion, while overseas retailers' revenues increased from USD 40 billion to USD 130 billion. This rise exemplifies the influence of international retail techniques and significant financial investments by foreign organizations.

Consumer spending has been strong, rising from USD 500 billion in 2014 to USD 850 billion in 2023. This rise is indicative of a more widespread increase in the ability to buy goods and services, as well as economic growth. Nevertheless, conventional retail's market dominance has decreased from 60% to 38%, suggesting a shift towards more structured retail structures. Supermarkets and hypermarkets have experienced substantial growth in their market shares, mostly due to urbanisation, increasing disposable incomes, and shifting customer tastes.

The online retail sector saw rapid growth but has experienced a modest fall in subsequent years, reaching a stable rate of 14% in 2023. This indicates an equilibrium between online and offline purchase habits after the epidemic. The prevailing pattern

indicates a transition from conventional to structured retail forms, highlighting the changing consumer environment in India.

This research highlights the wider economic effects of FDI liberalisation, such as the creation of jobs, the improvement of retail infrastructure, the growth in competitiveness, and the enhancement of customer experiences. India's ongoing efforts to liberalise its economy and enhance its business climate make it highly capable of attracting further international investment, which would in turn stimulate additional growth and modernization in the retail industry. This study offers a thorough comprehension of these processes, providing significant perspectives for policymakers and players in the Indian retail sector.

LIMITATIONS

This study provides a comprehensive analysis of the impact of FDI on the retail sector in India. However, it has several limitations. The reliance on secondary data sources, such as reports from IBEF, DPIIT, RBI, and industry publications, may introduce biases. The study uses descriptive statistics, which lack inferential depth. External factors such as global economic conditions, political stability, and domestic policy changes influence the impact of FDI. The rapid digital transformation and evolving consumer behaviors present challenges in capturing current data, particularly for online retail trends post-pandemic. The projections for 2023 are based on trends observed in the first three quarters of the year, which may not fully capture unforeseen market fluctuations. The study also lacks a deep geographic focus, overlooking qualitative factors such as consumer satisfaction, employee welfare, and the socio-cultural impacts of retail modernization driven by FDI.

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FACTORS AFFECTING WORK ENGAGEMENT OF TEACHERS IN HIGHER EDUCATION INSTITUTIONS: A LITERATURE REVIEW

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Abstract

Work engagement is grounded in the burnout literature, e.g., work engagement is the positive opposite of burnout and has been positioned as the opposite to the experience of burnout. Given the challenge higher education system in India has, it becomes imperative to take stock of the literature related to the literature published on work engagement, especially, of teachers who are considered the central assets to an institution. Thus articles, using a simple literature review method, explore the literature to identify the gap and proposing some propositions and a research framework which can be used by future researchers to refine and test the same.

Key Words: *Work Engagement, Teacher, Higher Education Institutions, J-D-R theory*

INTRODUCTION

Normal day-to-day meaning of engagement refer to involvement, commitment, passion, enthusiasm, absorption, focused effort, and energy. In a similar vein, the Merriam-Webster dictionary describes engagement as “emotional involvement or

commitment" and as "the state of being in gear". Theoretically, work engagement is grounded in the burnout literature, e.g., work engagement is the positive antithesis of burnout (Shuck, 2011) and has been positioned as the antipode to the experience of burnout (Schaufeli et al., 2002). The primary focus of work engagement is work activity (i.e., "When I get up in the morning, I feel like going to work"; Schaufeli et al., 2002). Employee engagement is nonetheless markedly different in both focus and definition. Specifically, and grounded in Shuck et al. (2014), employee engagement is reflective of an active psychological state and inclusive of the full spectrum of the immediate work experience (i.e., work, job, team, and the active experience of working).

Work engagement is most often defined as "…..a positive, fulfilling, work-related state of mind that is characterized by vigour, dedication, and absorption" (Schaufeli et al., 2002, p. 74). Individuals who are engaged in their work have high levels of energy, are enthusiastic about their work, and are completely immersed in their work activities.

Job demands-resources (JD-R) theory (Bakker and Demerouti, 2007) is one of the most-often used theories to explain work engagement. This theory suggests that both job characteristics and personal resources can be used to predict job performance by influencing employee work engagement. Therefore, workers are most likely to be engaged in their work when they face significant challenges and have adequate resources to handle them (Bakker and Sanz-Vergel, 2013; Tadic et al., 2015). Moreover, the theory proposes that employees can proactively seek job resources and challenges – for example, by asking for feedback, support, and opportunities for development, and by starting new exciting projects

The organizations need to have competitive advantage using human resources' efficiency, productivity and commitment at their workplace (Bakker and Schaufeli, 2008; Chen, 2018). The similar logic can be applied to success of educational institutions which relies fundamentally on the quality of teaching employees. Higher education institutions' staff who are skilled and well trained are more likely to be motivated and committed to their work of research and teaching (Lew, 2009). The

research indicates that managing human resources effectively help higher education employees to exhibit high level of commitment and work performance (Chen et al., 2009). At the institutional level, executing such policies and practices in an fitting way can improve organisational performance. Like, employees can play key role in improving institutional ranking with respect to research, reputation, community connect and teaching quality and hence numerous institutions capitalize employee management to achieve high performance and triggering organizational commitment and to encourage work engagement (Aladwan et al., 2015; Aktar and Pangil, 2018). The survival of higher education institutions essentially needs a highly engaged and committed employees (Nazir and Islam, 2017).

Largely research studies have been conducted in context of business organizations. However, recent pandemic induced turbulence has made major changes in the way educational institutions deliver their services to students and hence the engagement of teacher employees. This is where lies the significance of this study as work engagement in HEI is under-researched (Daniels, 2016).

In the following literature review, we have examined numerous studies and research papers which explore the concept of work engagement. The review aimed to identify and synthesize critical factors that influence work engagement among teachers and understand how these factors affect organisational commitment. The following literature review provided insights for the development of our research propositions.

LITERATURE REVIEW

Definition and concept of Work engagement

Work Engagement is operationalized as the opposite of *exhaustion, cynicism, and professional efficacy* (Schaufeli et al., 2002, 2006). Schaufeli et al. (2002) defined work engagement as the "positive, fulfilling, work-related state of mind characterized by vigor, dedication, and absorption" (Schaufeli et al., 2002, p. 74).

Over the past two decades, the number of studies on work engagement has increased rapidly. Work engagement refers to a positive, affective-motivational state of high energy combined with high levels of dedication and a strong focus on work (Schaufeli

and Bakker, 2010). It is highly desirable for contemporary public and private organizations to have engaged employees because engagement has been shown to coincide with high levels of creativity, task performance, organizational citizenship behavior, and client satisfaction

(Bakker et al., 2014). The majority of studies have adopted a between-person approach, showing that there are mean level differences in work engagement between individuals as a function of working conditions, personal characteristics, and behavioral strategies (Bakker et al., 2014). However, research over the past decade has shown that work engagement may also fluctuate within persons – across time and situations. For example, research has shown that workers are most engaged during challenging two-hour work episodes (Reina-Tamayo et al., 2017), during workdays preceded by evenings when workers have recovered well (Sonnentag, 2003), and during workdays when they have access to a variety of resources (Bakker, 2014).

Albrecht et al. (2018) expand previous work engagement research by showing how organizational-level resources and an organizational engagement climate relate to job resources and work engagement. Pecisely, they demonstrate that organizational engagement climate and job resources are positively associated with strategic alignment, human resource practices, and senior leadership, which then impact employee work engagement. This indicates that there may be significant potential in using top-down strategies to enhance work engagement.

Work engagement is a very good predictor of important employee, team, and organizational outcomes. Because of their strong dedication to and focus on their work activities, engaged workers show better in-role task performance (Christian et al., 2011) and better financial results (Xanthopoulou et al., 2009). Moreover, because of their openness to new experiences, engaged workers have more creative ideas and are more likely to innovate and be entrepreneurial (Gawke et al., 2017; Orth and Volmer, 2017). In addition to these individual-level performance outcomes, research has shown that engaged workers are more inclined to help their colleagues. At the team level, team work engagement has been found to positively associate with team performance (Costa et al., 2015; Tims et al., 2013). Engagement crosses over from one individual to

the other, and therefore has important ripple effects in teams (Bakker et al., 2006; Gutermann et al., 2017; Van Mierlo and Bakker, 2018).

Theoretical framework

JD-R Model of Work Engagement

The job demands–resources (JD-R) theory proposes that job resources are positively related to work engagement; challenge job demands can strengthen the positive link between job resources and engagement; hindrance job demands can weaken the positive link between job resources and engagement; work engagement is positively related to performance; employees can use job crafting to increase their own levels of work engagement (Bakker and Demerouti, 2017; Demerouti, 2014).

The JD-R theory focuses particularly on job characteristics, employee behaviors (e.g. job crafting, strengths use; playful work design; Bakker, 2017), and personal resources (e.g. self-efficacy, optimism, self-esteem). However, research has shown that stable personality traits can also explain part of the variance in work engagement. The review by Mäkikangas et al. (2013) has shown that the classic Big Five factors, particularly extraversion, emotional stability, and conscientiousness, were able to predict unique variance in work engagement. However, they observed that the factors behind the connection between personality and work engagement remain mostly mysterious. Are social workplaces preferred by extraverts or do they adapt to their work environments? Does emotional stability act as a buffer against the effects of job demands, or does emotional stability decrease the perceived level of job demands? There is a lot that still needs to be understood about the intricate connection between consistent traits and changing job features, and their impact on work engagement.

There are many patterns documented in the work engagement literature. Probably one of the most important trends is that engagement is studied as a phenomenon that may fluctuate within persons – across time and situations (Bakker, 2014; Sonnentag et al., 2010). Regular work engagement, whether it occurs daily, weekly, or sporadically, typically appears in a similar way whether examined as a widespread occurrence or as a variable occurrence. Daily engagement can vary based on daily demands, resources, and proactive behaviors, and is shown through levels of vigor, dedication, and

absorption. For instance, Xanthopoulou et al. (2009) demonstrated that daily work engagement (and therefore daily financial outcomes) depend on daily job and personal resources. Xanthopoulou et al. (2009) discovered that employees in fast-food restaurants were more engaged when they had a lot of resources available. Petrou et al. (2012) demonstrated that daily job crafting behaviors are linked to daily work engagement. It is important for organizations to understand that employees' engagement levels can vary while they are working. Nevertheless, understanding the overall levels of engagement and how human resources practices can impact them is also crucial.

Another important trend found in the literature is the link between leadership and engagement. Although quite a lot is known about the association between transformational leadership and engagement (Breevaart et al., 2014; Ghadi et al., 2013), leaders of contemporary organizations are increasingly realizing the importance of organizational cultures characterized by flexibility, agility, and responsiveness (Denning, 2013). Consequently, researchers are beginning to look beyond designated, formal and role-based sources of leadership, to instead look at a range of more inclusive leadership styles such as distributive, shared, collectivist, and adaptive leadership styles (Caulfield and Senger, 2017). Different leadership styles might enhance the recognized advantages of transformational leadership, especially in explaining how engagement in dynamic team-based environments is both started and kept up.

Besides approaches at the organizational level and from the top, recent studies have indicated that employees can also play a role in boosting their own engagement levels. A well-known approach from the bottom-up perspective is job crafting. Wrzesniewski and Dutton (2001) described job crafting as the adjustments individuals make to their tasks or relationships at work. These adjustments can be physical, like changing the nature, extent, or number of tasks or relationships, or cognitive, which involves changing one's perception of the job. In view of the JD-R theory, Tims et al. (2011) have demonstrated that job crafting can involve actively increasing job resources, raising the challenge of job demands, or lowering the hindrance of job demands. They discovered that employees across various fields engage in job crafting and regularly

modify their roles. In particular, job crafting that increases challenge job demands and job resources is positively linked to work engagement and task performance. Moreover, studies on job crafting interventions have shown that employees can learn to shape their jobs, leading to more job and personal resources, higher levels of work engagement, and better performance (e.g. Gordon et al., 2017; Van Wingerden et al., 2017). This suggests that job crafting is a powerful bottom-up strategy to enhance work engagement, as it increases the meaning of work and the alignment between the individual and the organization.

Work Engagement and Organizational Commitment

Work engagement is termed as a positive state of mind characterized by high energy, enthusiasm and deep concentration at work (Schaufeli et al., 2002), while organizational commitment, is considered viewed as to what extent is the strength of the employee identification to his organization (Li, 2014). These views imply that organizational commitment is more concerned with the nature of the relationship between the staff and the organization, while work engagement is concerned with the nature of relationship between the employee and his work (Kim et al., 2017). Several studies treated organizational commitment as a multidimensional variable which can be measured by three categories: affective (the level of emotional attachment), continuous (perceived cost) and normative (obligation) (Allen and Meyer, 1990). These measures are widely used and the most accepted dimensions of organizational commitment (Klein et al., 2009). The research shows that commitment in higher education is a significant element in achieving high performance among academics (Eisinga et al., 2010). Park et al, (2021) suggested that transformational leadership had a significant impact on employee affective organizational commitment and job performance through employee engagement as a mediator.

The earlier researchers have approached many dimensions of managing human resources in HEIs (Chen et al., 2009; Lew, 2009) with more focus on topics such as morale of teaching and administrative staff (Rosser, 2004), staff job satisfaction (Smerek and Peterson, 2007) and professors' intention to quit (Johnsrud et al., 2000). However, the research related to engagement in higher institutions is very limited (Nazir and Islam, 2017; Wilkins et al., 2017). Additionally, other dimensions such as

organisational commitment are under explored (Wilkins et al., 2017). Researching this question in this context requires deep attention as research shows that the engagement of academic staff stimulates research publications and outcomes in HEIs (Christensen et al., 2018). The broad Research Question is set as which factors influence HEI teachers' work engagement and how does it affect organizational commitment?

DISCUSSION AND CONCLUSION

The present literature review synthesizes the existing literature on work engagement. The primary aim of this review was to identify the critical factors that affect work engagement and to understand how these factors impact organizational commitment among teachers in higher education institutes. Taking insights from the JDR model we have proposed to explore different types of resources that influence work engagement. The findings reveal several critical insights that have both theoretical and practical implications.

From the above literature review on work engagement, some key insights have been emerged. The review highlights the critical role that various types of resources play in influencing work engagement among teachers. Based on the findings we propose to explore the role of Organisational Resources, Personal Resources and Job- related resources in increasing work engagement among teachers. Therefore, we propose the following propositions to guide further research and discussion:

1. Organisational resources positively affect work engagement.
2. Personal resources significantly influence work engagement.
3. Job-related resources have a positive impact on work engagement.
4. Work engagement positively influences organisational commitment.

Although a lot of research on work engagement has been done in the setting for business organizations, there hasn't been much of it applied to higher education institutions. This assessment closes this gap by emphasizing the distinctive atmosphere of educational establishments. This review, which makes use of the Job Demands-Resources (JD-R) model, finds that organizational resources, personal resources, and job-related resources are the main variables affecting teachers' work

engagement. To comprehend how these resources, interact to improve work engagement, a strong theoretical foundation is offered by the JD-R model.

Practically, the insight gathered from this research indicates that universities may improve teacher engagement through strategic resource management. For example, enhancing organizational resources like opportunities for professional growth, supportive work environments, and support systems may greatly increase engagement levels. A positive and stimulating work environment is also greatly influenced by job-related resources like autonomy and feedback as well as personal resources like optimism and resilience.

To conclude, the preset literature review highlights the importance of different types of resources at the workplace to enhance the organisational commitment in the context of teachers. The suggested propositions lay the groundwork for further investigation to improve organizational commitment and engagement in higher education institutes.

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PRESPECTIVE

EVOLVING INVESTOR STRATEGIES: DIVERSIFYING PORTFOLIOS WITH EMERGING ALTERNATIVE ASSETS

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INTRODUCTION

Investors increasingly seek ways to diversify their portfolios to mitigate risks and enhance returns in the contemporary financial landscape. Traditional asset classes such as stocks and bonds have long been the foundation of investment portfolios. However, seeking higher yields, reduced volatility, and greater resilience during market turbulence has led to exploring alternative asset classes. This shift is not merely a trend but a strategic response to the evolving dynamics of global markets, where traditional investments alone may not suffice to achieve desired financial outcomes.

Emerging alternative asset classes, including art, wine, and collectables, offer unique opportunities for portfolio diversification. Art, for instance, has shown significant growth potential and low correlation with traditional asset classes, making it an attractive option for investors. The art market's resilience during economic downturns and its capacity for substantial value appreciation, as evidenced by the remarkable increase in value of Jean-Michel Basquiat's "Untitled" from 1984 to 2017, underscores its potential as a viable investment (Mamarbachi, Day, & Favato, 2019). Similarly, fine wines have demonstrated impressive returns, with the Liv-ex Fine Wine 1000 Index outperforming major equity indices over the past decade (Masset & Weisskopf, 2018). Collectables, including rare coins, stamps, and vintage automobiles, also offer

significant appreciation potential due to their scarcity and historical significance (Burton & Jacobsen, 1999).

Despite their benefits, incorporating these alternative assets into investment portfolios presents challenges. The valuation of art, for instance, can be highly subjective and influenced by trends, critics, and market demand, making it a complex asset class to navigate. Wine investments require knowledge of specific vintages and storage conditions to preserve value, while the market for collectibles can be volatile and illiquid. Nevertheless, the strategic inclusion of these assets can enhance portfolio resilience and provide a hedge against inflation and economic downturns. By diversifying into these emerging alternative asset classes, investors can achieve a more balanced and robust portfolio, capable of withstanding various market conditions and delivering long-term financial gains.

The Need for Diversification

Diversification is a fundamental principle of modern portfolio theory, which posits that a well-diversified portfolio can achieve a more favourable risk-return profile (Markowitz, 1952). Traditional diversification strategies have primarily focused on spreading investments across different industries and geographies within conventional asset classes. However, recent market developments have underscored the limitations of such strategies, particularly during periods of economic uncertainty when correlations among traditional assets can increase (Bodie et al., 2014).

Emerging Alternative Asset Classes

Private Equity and Venture Capital: Private equity and venture capital investments involve investing in private companies, often at early stages of development. These assets are less liquid than public equities but offer the potential for substantial returns, particularly if the invested companies grow significantly (Lerner et al., 2012).

Real Assets: Real assets, including real estate, infrastructure, and natural resources, provide tangible value and often have low correlations with traditional financial assets. These investments can offer protection against inflation and generate steady income streams (Newell & Marzuki, 2018).

Cryptocurrencies and Digital Assets: Cryptocurrencies, such as Bitcoin and Ethereum, represent a novel asset class characterized by high volatility and substantial return potential. As blockchain technology matures, digital assets are increasingly viewed as viable components of diversified portfolios (Baur et al., 2018).

Hedge Funds: Hedge funds employ various strategies to achieve positive returns in both rising and falling markets. These funds can invest in a wide range of assets, including derivatives, currencies, and commodities, providing additional layers of diversification (Fung & Hsieh, 2004).

Art as an Alternative Asset

Art investment has significantly risen due to its low correlation with traditional asset classes, offering diversification benefits. The art market, valued at over $67 billion in annual sales, provides substantial growth potential. For example, Jean-Michel Basquiat's painting "Untitled" increased in value by over 224,060% from 1984 to 2017. Despite the high variability in art prices, its resilience during economic downturns makes it an attractive investment (Mamarbachi et al., 2019) (ARTLIFE).

Wine as an Investment

Wine investment offers unique benefits due to its tangible nature and limited supply. Fine wines, particularly those from renowned regions like Bordeaux and Burgundy, have shown impressive returns. The Liv-ex Fine Wine 1000 Index, which tracks the price performance of the most sought-after wines, outperformed major equity indices over the past decade. Investing in wine provides financial returns and offers personal enjoyment and the potential for portfolio diversification (Masset & Weisskopf, 2018).

Collectables

Collectables, including rare coins, stamps, and vintage automobiles, have emerged as viable alternative investments. These assets are often appreciated due to their scarcity and historical significance. For instance, classic cars have shown consistent value growth, with the HAGI Top Index for collectable cars increasing by over 300% over the last ten years. Collectables can serve as a hedge against inflation and provide portfolio stability (Burton & Jacobsen, 1999).

Benefits of Alternative Assets

Incorporating alternative assets into a portfolio significantly enhances diversification by introducing exposure to various risk factors and return drivers. Private equity, for example, provides returns that are driven primarily by the performance of individual companies rather than broad market trends. This allows investors to capitalize on the unique growth trajectories of private firms, which can be less correlated with public market fluctuations (Ang, 2014). Real assets such as real estate and commodities offer stability through their intrinsic physical value and utility, providing a hedge against inflation and currency fluctuations (Ang, 2014).

Furthermore, hedge funds utilize sophisticated strategies that exploit market inefficiencies, thereby delivering uncorrelated returns. These strategies, including long-short equity, arbitrage, and global macro, enable hedge funds to generate positive returns even in declining markets. This ability to perform independently of market direction adds a layer of protection to an investor's portfolio, reducing overall risk (Agarwal & Naik, 2004). By diversifying into these alternative assets, investors can achieve a more robust portfolio that not only aims for higher returns but also offers greater resilience against economic downturns and market volatility.

Challenges and Considerations

While emerging alternative asset classes offer promising diversification benefits, they present several challenges that investors must navigate. One primary concern is liquidity. Unlike traditional investments, alternative assets often require higher minimum investments and longer lock-up periods, which can limit an investor's ability to quickly convert these assets into cash (Swensen, 2009). For instance, fine art and rare collectibles may take considerable time to sell, and their market values can be highly variable, complicating the timely liquidation of these assets.

Additionally, the complexity of alternative investments necessitates a higher level of expertise and due diligence. These assets often come with intricate risk profiles that require thorough understanding and careful management. Higher management fees and transaction costs are also common, potentially eroding the overall returns. Swensen (2009) emphasizes that the specialized knowledge required to effectively

invest in these markets can be a barrier for many individual investors, often necessitating the involvement of professional advisors or investment firms, which further increases costs.

Regulatory and market uncertainties add another layer of complexity, particularly in emerging sectors like cryptocurrencies. The rapid evolution of these markets, coupled with a lack of comprehensive regulatory frameworks, can expose investors to significant risks. Regulatory changes can impact market dynamics and asset valuations, making it essential for investors to stay informed and adaptable. Therefore, while the potential for high returns and enhanced diversification is attractive, the inherent risks and challenges associated with alternative asset classes demand careful consideration and strategic planning (Baur, Hong, & Lee, 2018).

CONCLUSION

As investors seek to navigate an increasingly complex and interconnected global market, the inclusion of emerging alternative asset classes in portfolios offers a compelling avenue for diversification. By balancing the potential rewards with the inherent risks, investors can enhance their portfolios' resilience and adaptability. Diversification is a fundamental strategy in portfolio management, traditionally achieved through a mix of stocks, bonds, and real estate. However, emerging alternative asset classes like art, wine, and collectables are gaining traction among investors seeking to enhance portfolio performance and mitigate risks. This paper explores the benefits and considerations of incorporating these unconventional assets into investment portfolios. Future research should continue to explore the evolving dynamics of these asset classes and their integration into holistic investment strategies.

Incorporating emerging alternative asset classes like art, wine, and collectables can enhance portfolio diversification and provide unique growth opportunities. While requiring careful consideration and expertise, these assets offer resilience and potential returns that complement traditional investments.

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☐ Cheque / DD is enclosed in favour of **" Apex Subscription Pvt. Ltd."** Payable at Mumbai.

Amount : _____

Cheque / DD No : _____ Dated : _____ Drawn on Bank

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Bank A/C No : 02122320004035, IFSC Code: HDFC0000212

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