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**Financial Literacy & Economic Empowerment of
Women in India: Challenges & Opportunities**



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*Special Issue of National Conference
on*

**Financial Literacy & Economic Empowerment of
Women in India: Challenges & Opportunities**

Chief Editor

Dr. Raju Guguloth

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CONTESTS

<i>Sl. No.</i>	<i>Titles & Authors</i>	<i>Page No.</i>
1.	Bridging the Confidence Gap: How Educational Programs can Drive Empowerment and Leadership Among Women Dr. Girish V., Mohan Kumar S M, Deepak G	1
2.	Challenges and Economic Empowerment of Women in Telangana through Gold and Stock Market Investments Dr. D Sanjeeva Rao, P. Sarada	8
3.	Empowering Women Through Strategic Decision-Making: Bridging Financial Literacy and Economic Independence in India Konda Sumana Yadagiri, A. Dayanand, A. Vasantha	12
4.	Financial Literacy Education: A Comparative Analysis with Core Subjects and Its Community Impact Dr. P. Venu Madhav, Dr. B. Swetha	17
5.	Assessing the Growth Dynamics: A Comparative Analysis of Production, Sales, and Employment in the Khadi and Village Industries Sector Dr. Tulja Bhavani	20
6.	A Study on Personalized Digital Marketing and its Impact on E-Vehicle Purchase M. Sammaiah	26
7.	Strategic Decision- Making in Economic Empowerment of Women Dr. G. Renuka, Dr. D. Ramakrishna Reddy	31
8.	Fostering Entrepreneurship and Skill Development for Sustainable Socioeconomic Growth: Analyzing the Present Landscape and Future Prospects for Telangana State Dr. D. Sukhaprada Devi	36
9.	Financial Literacy of Women in Telangana State: A Study Dr. B. Shirisha	41
10.	The Future of Insurance: A Digital Transformation Dr. T. Haanmandlu	44
11.	DEI Policies are Transforming Workplace Culture in 2024 Naganeeka Noone	48
12.	Impact of Digital Payments on Retail Sector Dr. J. Sunitharani	53

13. Digital Payments and Financial Inclusion: A Comparative Analysis of Urban and Rural Areas in Telangana	56
K. Prabhu Sahai	
14. Women in Financial Literacy: Impact of Sustainable Development	64
P. Samatha, Pokkula Sreepriya	
15. Financial Literacy Among Women Entrepreneurs in India	69
Boorla Hemalatha, Dr. Banda Rajani	
16. The Effectiveness of Financial Educational Programe on Retirement Planning Among Staff of Tara Government College (A), Sangareddy	75
Veerender Madasu, Dr. Santosh Bansirao Gaikwad	
17. Impact of Green HRM Practices Among the Employees: An Evaluation	80
Suryapeta Sneha Bhargavi, Dr. Raju Guguloth	
18. A Study on the Behavioural Finance Perspective of Investor Awareness and Decision-Making in Gold and Stock Markets	83
Dr. Bakki Srinivas	
19. Harnessing AI and IoT for Inclusive Growth in Women Entrepreneurship in India	89
Bharathi Ponaganti, Ramya Tinglekar, T. Aruna	
20. Strategic Decision-Making in Economic Empowerment of Women in India: A Study	93
Dr. Burla Naresh, Dr. S. Ramesh	
21. Influence of Banking Sector on Individual's Economic Welfare: A Study	98
Dr. G. Rajitha	
22. Architecture of Ancient Telangana	103
P. Manishka Reddy	
23. Role of Cooperative Banks in Rural Development– A Conceptual Study	106
Katta. Nagaraju, Dr. Thirupathi Kanchu	
24. Opportunities and Challenges in Digital Financial Literacy	112
Mavurapu. Shirisha, Miyyapuram Samatha	
25. E-Banking and Operational Efficiency of Select Private Sector Banks – An Empirical Investigation	118
Prof. D.Rabindranath Solomon, Zeenath Jahan	

Bridging the Confidence Gap: How Educational Programs can Drive Empowerment and Leadership Among Women

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Abstract

The satisfaction gap between women demanding fairness and understanding in the organization is effectively a challenging one to overcome and does not encourage the change of social attitudes in gender-centric cultures. This systematic review looks at how educational programs help or hinder confidence, self-efficacies and leadership for these challenges. In this review, results are grouped according to conceptual areas of the gap: the challenges that produce it, educational interventions for increasing confidence, technology for confidence building, and results yielded from the programs. Further, it discusses regional considerations, herein the Indian context, and reviews the gaps in the literature, including minimal consideration of rural women, intersectional issues, and longitudinal studies of programmes. The review ends by presenting policymakers, educators, and organizations with principles to enable the closing of the confidence divide. This research should focus on more longitudinal work, culturally relevant research, and use of technology for empowering education in the future.

Keywords: Confidence Gap, Women Empowerment, Leadership Development, Educational Programs, Technology in Education, Intersectionality, Rural Women, Gender Disparity, India and Women in leadership

Introduction

The gender confidence gap remains a major issue for women's empowerment and leadership, especially in genders, where culture and prejudice reign. This paper aims at undertaking a systematic review of such educational programs and their contribution to confidence, self-efficacy, and leadership. The review organizes conclusions into major areas of investigation: hurdles to the confidence gap, educational approaches, technologies for inclusion and efficacy, and result-oriented actions. Further, it analyses the role of region specifically within the Indian context, and the paper's limitations, including the dearth of studies that target rural women, research considering intersectionality, and longitudinal exploration of the program. The review is

finished with the following guidelines for policymakers, educators, and organizations to apply to create a system to close the confidence gap. Prospective research should focus on increased longitudinal research work, cross-cultural comparison, and the use of modern technology in education promotion.

Significance of Educational Programs in India

This happening as education has been seen to be one of the best solutions to bridge the confidence gap among women in India and assist women get leadership positions. Such programs are sometimes not traditional academic interventions, but rather, address skills achievable, leadership, and confidence. They also respond to the Indian conditions like education for

rural development, culture or mentality about women empowerment and their absence in leadership roles.

For instance, **Beti Bachao Beti Padhao** and **Skill India** launched by government to empower women in education and training. Like for instance **SEWA** (Self Employed Women's Association) and **CARE India** have also instituted measures for women employment trainings and imparting financial awareness. Such leadership training programs like **IIM's Women Leadership** Programs or these sector-specific programs as **NITI Aayog Women Entrepreneurship** Platform have let women use their confidence instruments and start fighting for equal rights in their respective fields.

Also, websites such as Shiksha Initiative for Education for Girls, Children & Women and Google Internet Saathi, women at rural areas are educated and empowered to undertake freedoms of making decisions regarding themselves and their homes and communities. These programs offer women as well as enhance their practical understanding of the world while also enabling them to question and transform long-held conventions that have hemmed them in.

The effect of such educational programs is indeed felt. Most of the female participants who go through these programs were found to develop higher self-confidence, assertiveness in communication and a positive attitude to provide leadership. Consequently, their morale boosts their families and in the communal circuits bring on the societal change in the formers' demeanours towards the women capabilities as well as their constructive input.

Objectives of the Review

The present systematic review of research aims at identifying how the educational programs in India can effectively impact and ensure women assume leadership positions. The specific objectives are:

1. To understand the confidence gap in the perspective of Indian individuals.
2. To appraise the educational programmes in India
3. To determine several strategic components of effective educational practices
4. To fill those gaps of the existent research and practice

In endeavours to fill this gap this review aims at providing evidence of women empowerment and leadership within Indian context as a contribution to existing knowledge. It aims at offering recommendations for policy makers, school administrators as well as organisations that could encourage the enhancement of women confidence and empower them in their leadership roles in society.

Methodology

The systematic approach followed in the present systematic review assesses a range of literature to understand how enlarging educational programmes support the enhancement of confidence among females and leadership roles.

I. Search Strategy

The systematic review of papers for identified studies was done from Scopus, Web of Sciences, PubMed, and Google scholar. The nature of data required for this analysis called for these databases due to their comprehensive indexing of interdisciplinary and peer-reviewed literature. Keywords used in the search were tight and in addition, some of the used search terms included confidence gap, women leadership, educational empowerment programs, leadership training for women and the gender gap. Entering AND before the term created conjunction while placing OR before the second one dissected the search term; the filters were applied to selecting English and peer-reviews articles, reports, and dissertations published only. Furthermore, an attempt was made to identify specific ES through an indexed database search for gray literature, conference proceedings, reports on initiatives related to India and developing countries.

II. Inclusion and Exclusion Criteria

To maintain relevance and quality, particular criteria for inclusion and exclusion was developed. Studies included in the review were empirical (quantitative, qualitative, or mixed methods) or theoretical in nature and focused on the confidence gap, women's empowerment, and leadership development. Case studies and reviews of educational programs with a confidence-building or leadership focus were also considered. The review focused only articles and papers published within the last decade (2014 to and including 2024), with particular attention being paid to global studies and those in the context of India. Out of the thousands of articles retrieved, a selection criterion was applied in order to narrow down the topics of the review: articles not reporting on instructional use and leadership; articles not linked to educational management; opinion pieces that fail to provide any empirical or theoretical insight. On our own decision, any studies in languages other than English or those which was methodologically flawed, were also excluded.

III. Data Extraction and Analysis

The study selection started with the title and the abstracts of the papers which were screened to select those containing the characteristics described in the inclusion criteria. The final step was then to read full-

text reviews with aims to identify their applicability and quality in practice. Each paper was reviewed in terms of methodological quality using an a priori identified set of appraisal criteria related to study design, sampling, and validity. To conduct the data extraction, a structured form was employed with fields for study information including author(s), year of publication, study location, aim and objectives, method of study and major points in the direction of confidence-building as well as leadership results.

Thematic Review of Literature

Based on the results of the literature review, organizing it into themes makes it easier to present a systematic analysis of the identified confidence gap as well as the approaches offered by educational programs to help eliminate it

I. Confidence Gap: Barriers to Empowerment and Leadership

There have been cases of confidence gap as a major hindrance to women's rights and leadership by effects of socialisation, psychology and organisational prejudice. The following literature will attempt to describe these dimensions in detail.

Haynes and Rosenbach (2011) and Ely, Gablenz and Stasser, (2011) consider gender issues as starting point to leadership development for women. Their study also underpins how diverse leadership training regularly fail to capture issues touching on gender including biases that subordinate female leaders besides the deficiency of mentorship. To sum this up, by gender-sensitive designing the leadership development programmes, the impact of general structural prerequisites of women's low leadership potential may be diminished. The authors argue that cultivating confidence and leadership skills in women requires a dual approach: mitigating internal and external origins of imposter feelings and perceptions in contexts at the workplace. **Sandberg (2013)** in *Lean In* agrees that working women lack confidence because these norms have been directly wired in to them owing to socialization. This is in reference to women who she opines are known to lean back probably due to the effects of the failure or judgment call thereby losing the juicy leadership positions. In this paper Sandberg emphasises the role of self-promotion and living with risks in order to overcome the Confidence Gap in women. However, she also make prescriptions within organizational contexts to reshape organizational cultures to foster women capabilities to take leadership roles. First, **Clance and Imes (1978)** coined the term imposter phenomenon, a retrospective process that involves scepticism about success and expectation of being discovered as a fake.

This their research was able to highlight that this tendency is present predominantly in high achieving women in particular, these are the women who take the lowest self-attribution for their success by invoking chance luck instead of ability. The self-doubt that is caused by the societal norms and the resulting pressures to refrain from applying for leadership roles cause the confidence gap. **Adams and Funk (2012)** analyze the gender differences in leadership through their paper on the glass ceiling. Others have suggested that gender bigotry in the wider community as well as in organizations means that appraisal of women leaders is done more stringently, which merely aggravates the issue of confidence differential. The study also underscores that women are likely to lead differently, and such leadership styles do not adversely affect organizational performance but appear to enhance it by avoiding marginalised risksameness and being more diversely perceptive. Even so, the confidence gap remains because such issues are the result of structural factors that do not allow women to take on leadership positions and be recognized. Stereotype threat, which, according to **Hoyt and Murphy (2016)** is the phenomenon where in a given activity an individuals underperforms due to perceived stereotype, is discussed. The paper focuses on two key points: Women in managerial posts are always put under much pressure to deliver than their male counterparts and this puts a lot of pressure on them due to the duality of demanding tasks. The authors identify the usefulness of mentorship, building resilience and organizational interventions to address stereotype threat for women leaders.

Altogether these works demonstrate how psychological, social, and organizational enablers contribute to the continued existence of the confidence gap within women. Redressing this deficit will therefore call for appropriate interventions for change at individual, organisational, and societal levels to enhance women limitless and open opportunities for leadership.

II. The Role of Educational Programs

Extensive education or teaching programs need to features more prominently in the social justice schemes since they shape the women into more competent empowerments to lead in their respective organizations. By so doing these interventions respond to the more general structural and psychological constraints that are placed on women in organizations and ensure equality for women

Coleman (2012) further emphasize that leadership development programs scale up equity and social justice in education. This work looks at how educational measures can be used to challenge policy-related

inequalities and foster women's path to leadership positions. Combining equity and social justice theories in educational programs allow people and students in particular to develop a transformative leadership approach that will enable women to overcome such barriers in their careers. Early and Carli for instance have used the word 'the Labyrinth of Leadership' to argue that women do not road map to leadership but one that is full of defects that have to be worked through. This the authors have tried to advocate for the fact that educational programs can play an important role in helping women prepare to overcome these barriers. Some of these programs can teach negotiation, communication and dealing with pressure and stress all of which are very important in organizational life and cracking the labyrinth. **Bandura (1997)** defines self-efficacy as the single theory that identifies the potential of a given individual to succeed or be empowered. Using Mastery experiences and role modelling methods for exacerbation of self-efficacy in educational programmes enhance the confidence of the women. The proposed framework by Bandura makes this paper as a guide for the development on intervention that will help women to reverse conformity and for that they able to apply for leadership positions with positive self-regulation. **Singh et. al., (2001)** are center on the issue of women in corporate boards and senior management. They opine that other specific educational efforts like the board-readiness programs and the mentorship initiatives are critical in filling the gender gap on the boards. They establish the fact that educational programmes that aim at carving a niche for the female in leadership positions must go further than encouraging the development of technical and strategic skills among the female gender but also ensure that she has access to the right networks and sponsors. **Ryff and Keyes (1995)** look at the components of psychological well-being which can be associated with Empowerment and leadership characteristics. The authors postulate that leadership could improve elements of well-being that stem from educational programs including, autonomy, peace, and purposes in life. Traditionally gender sensitive longer developmental programs can Chip away woman's lack of confidence and equip her with positive psychological attributes to do a leadership role.

These studies combined therefore established new dawn for educational programs in the promotion of women's empowerment and leadership. Such programs address both psychological and structural factors, and while they ensure women are ready to confront the organizational and social challenges at a leadership level, they therefore

promote gender parity for leadership.

III. Outcomes of Educational Empowerment

Education in itself has far reaching and complex effects for the female gender, in terms of the manner which they appreciate their worth, exemplify leadership and in the society in terms of the changes initiated and / or participated in form of diversity and economic activity. The following literature explores these outcomes:

According to **Deci and Ryan (2000)** self-determination is instrumental in people's behaviour, as educational authority and support fulfils three psychological needs- autonomy, competence, and relatedness. Following their framework, they dissect how and why educational programs that develop the intrinsic motivation of women result in higher confidence, self-efficacy, and proactivity in setting goals among these females resulting in the creation of stronger leaders. **Luthans and Avolio (2003)** examine the behavioural contents of authentic leadership, and relate this to the ingredients of self-awareness, relationship authenticity and value-based leadership. It is enlightening that educational programs focusing on these ingredients enable women leaders to build their personal traits and thereby leading them to greater confidence and credibility. This approach also enriches cultures of organisations by increasing ethical reasons in decision-making processes and the creation of diverse and inclusive organisational cultures. **Cheung and Halpern (2010)** have devoted their work to analyze the gender and leadership in cross cultural context. This is one of their findings about how empowered major leaders reconstruct success to include paid work/family. Such academic courses prepare women for better leaderships and organizational leadership and work-life balance competencies that aid them in both the private and public domains and changed the perception of the society about women as leaders. In **Catalyst (2020)**, a wider organisational value on D&I such as enhanced creativity, superior decision making and enhanced viability is featured. Women should be encouraged to go to school and leadership training not only in order to bring the best out of them, but to avail the society better workplaces. In enhancing people diversity, educational empowerment support organizations and societies at large by achieving organizational change. The by World Economic Forum – latest data from 2021 show that education remains one of the primary gaps that need to be closed in order to achieve parity between men and women all over the world. It outlines educational empowerments as one way through which the situation of women in the aspects of economies, politics, and society can be transformed. To some extent, programs for the training of women's skills and self-assertiveness help

to break gender inequalities and promote development.

Available studies are aimed at demonstrating the positive impacts of educational empowerment and the listed works can be seen as presenting the comprehensive picture of the changes in question. Such programming can affect the woman to eradicate barriers, move up to the organizational leadership, and blossom organizational/institutional and societal womanhood.

IV. Technology in Educational Programs

Technology enhances the way educational programs are delivered and the results from program delivery as more learning gains originating from enhanced access, interactivity and individualization. Hence in the context of Woman Empowerment and Leadership, technologically including online platforms, Mobile learning and Wearable Technology has opened new dimensions to training and building confidence of woman.

Using web technology, **Bonk (2009)** points out that time and geographical space are no longer prohibitive to e-learning. Self-employed women are privileged since they can attend leadership and skill enhancing courses at their own understanding without restrictions of geography or society. In the given way, educational programs can give necessary tools and materials to the different groups of people and reach out for them with the help of technology. Mobile learning has been around for sometimes now and according to **Crompton (2013)** has grown from a focus on technology to a focus on the learner. Use of mobile learning technologies including applications and portable devices assists to promote women since they continue to upgrade their knowledge and skills. These tools facilitate deployment of individualized learning as well as promote independence and a tendency towards leadership. Connectivism is presented by Siemens in 2005 as a new way of perceiving learning as a networked space supported by new media. Connectivism is highly suitable to the contemporary world of learning because knowledge is constantly being constructed and shared. Connectivist approaches used in courses help women create professional contacts, be exposed to numerous viewpoints, and learn how to complete complex puzzles. They benefit in such approaches because they groom them to be ready for leadership responsibilities. Wearable technologies, including smartwatches and augmented reality devices are the focus of **Bower and Sturman (2015)** in terms of the learning opportunities that learners experience. These technologies allow for more straightforward and engaging learning together and can be useful in cases of developing confidence, for example through public speaking, or in leadership

practice scenarios. Wearable technologies also provide feedback when required and allow learners build confidence practicing with the device. In fact, **Pachler et. al., (2010)** acknowledge structures, agency and practices in relation to mobile learning. Their study also reveals that mobile technologies factor into learners' enactments in ways that support flexible, contextual and socially integrated learning. For women these features are useful in surmounting the traditional barriers to education and leadership training that results in both agency and empowering of women.

In total, these works provide evidence of how technology has reshaped the delivery of educational programs. Besides, improving not only the accessibility and quality of learning but also capacity-building and confidence of women leaders, technology connects innovative tools and methods to transform learning.

V. Case Studies and Regional Perspectives

Literature reviews and cross-cultural discussion present numerous best practices and implications of educational empowerments programs of sociocultural concern. In India there are many organizations which have effectively dealt with the challenges that prevent women from occupying leadership positions and hence bringing change.

Ancillary to this, the report on Women Entrepreneurship Platform by the **Ministry of NITI Aayog (2018)** provides a government-sponsored agenda for women entrepreneurship. They are usually Social Protection, Internship/Twinning, Empowerment, Resources and Skills, and Networking services, that help women to address societal and structural barriers to entrepreneurship. Through issues of equity, funding, skills and experience, WEP has assisted women entrepreneurs to transform into business leaders who foster economy growth. The factual program like Google and Tata Trusts Internet Saathi conducted in 2019 also proves the effectiveness of the digital literacy camp organized in rural India. Through training this women to go to the internet as a source of information and learning they have been sensitized and are able to make informed decisions as they participate more in economic and other community activities. This case makes it clear that educational programmes build on technology can bring about gender disparities and leadership at the base. According to the **UN Women (2020)**, the idea of the Sex and Gender-Based Analysis is to mainstream gender into the Global 2030 Agenda for Sustainable Development. It also advocates for women education as a way of preparing them for leadership corridors and allowing them to be part of decision-making processes. The examples of educational campaigns that have

boosted the women's prospects for leadership positions across the regions are described in the report, especially in India and South Asian countries. **Catalyst (2019)** delves into what the firm calls the 'power of parity,' and highlights programs that got women to the top across sectors. I found that among recommendations, strategies for solution to barriers to leadership include mentorship, training, and organizational support. Several examples from India advocate for culture relevance when developing interventions in special needs that concern women education. **SEWA (2021)** explains its mission and functioning as an organization that supports women in the informal sector. Training and capacity building program thus conducted through educational workshops and financial literacy programs and leadership training have done wonders for SEWA and millions of women of India. This is evident in. XML This has shown that context specific educational programs can effectively produce long term societal transformations especially through training leadership at the grassroots level.

These case-studies showed how relevant regionalism is in conceptualizing and conducting educational empowerments. Since such programs focus on local problems and use resources in the community, it is possible to promote the sustainable leadership development and gender equality in various settings.

Research Gaps and Future Directions

Despite significant progress in understanding women's empowerment and leadership, several research gaps remain unaddressed:

Rural Women and Marginalized Communities: Specifically, most of the conflict studies have focused on the urban and corporate lives while the rural women and other vulnerable groups are missing. Research fails to consider how one or multiple systems of oppression like caste, class, or ethnicity influence women's leadership experiences in the villages. Subsequent studies ought to examine the place-based ED initiatives designed for these populations.

Intersectional Barriers: Gender combined with other aspects of diversity including age, religion, diversity, disability, and SES is not easy to deal with in leadership. Few studies have focused on how these factors contribute to enhanced confidence disparity and control leadership entry points. Filling these gaps calls for intersectional approach that would capture the Black women's experiences

Effectiveness of Long-Term Interventions: Many research investigations are meant for outlining the short-term effects of the educational and empowerments programmes. Longitudinal research is needed to evaluate the sustained effects of these initiatives on women's

confidence, leadership skills, and career progression.

Role of Technology in Empowerment: While technology's role in education and leadership is emerging as a critical theme, there is limited research on the effectiveness of advanced tools like AI, VR, and gamification in addressing the confidence gap. Future studies should investigate how these technologies can be scaled and integrated into leadership programs.

Cross-Cultural and Comparative Analysis: Most studies are region-specific, with few cross-cultural comparisons that explore global best practices in women's empowerment. Comparative research can provide insights into transferable strategies that work across different cultural and economic contexts.

Recommendations for Future Studies

Conduct longitudinal studies to assess the long-term impact of educational programs on women's empowerment and leadership.

1. Consider intersectionality by recruiting diverse women, from rural areas, from marginalized backgrounds or with disability.
2. Investigate the role of emerging technologies like AI and AR in creating effective and scalable confidence-building programs.
3. Undertake cross-cultural research to compare and analyze strategies for reducing the confidence gap and fostering leadership globally.
4. Engage policymakers, non-governmental organizations, as well as entities in the education sector to establish synergistic frameworks which can guide the practical application of the knowledge thus produced.

Conclusion

This review focuses on gap discovered in self-confidence among women and its influence on decision-making and advanced roles. This highlights the extensive significance of education programmes both conventional and technologically based in the process of closing this gap. The results imply that even though there is improvement in this area, the root causes having to do with cultures, tendency, and intersectionality still remain relevant as barriers to women's leadership.

Practical implications include:

- For Policymakers:** Promote policies that tend to eradicate enhancement of femininity and apply such policies preferentially in rural and marginalized areas.
- For Educators:** Design culturally appropriate and IT integrated courses for combating inferiority complex

and for strengthening leadership portfolios of women.

- iii. **For Organizations:** Encourage the adoption of mentorship, use of flexible working conditions, and employing gender-sensitization in women leadership positions.

Indeed, filling these research gaps and by using the information from this review, it is possible to encourage stakeholders to design a tolerant environment for empowering the female leaders in various sectors.

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Challenges and Economic Empowerment of Women in Telangana through Gold and Stock Market Investments

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Abstract

In Telangana, women's economic empowerment has become more important, especially as they increase their savings by investing in gold and the stock market. As traditional choices such as gold have cultural significance, while investments in the stock market represent modern financial opportunities, both forms of investment contribute to women's financial independence and wealth accumulation. The aim of this study is to explore the challenges faced by women in Telangana when investing in these assets and to assess their awareness, motivation and satisfaction with these investments. The study explores how investing in gold and the stock market empowers women to make independent financial decisions and increase their financial and emotional security. The extent of wealth accumulation in these investments reflects women's confidence and self-determination and encourages them to actively participate in the financial markets. To gain insights into this dynamic, primary data was collected through a structured questionnaire administered to a diverse sample of women investors in Telangana. The study analyses the key challenges faced by these women, including knowledge gaps, market volatility, risk perception and access to reliable financial advice. The Present study shows that there is a need to close knowledge gaps and empower women to make informed investment decisions in order to achieve long-term economic empowerment through greater financial autonomy

Keywords: Women's Economic Empowerment, Gold Investment, Stock Market Investment, Financial Independence, Financial Literacy.

Introduction

Investment decisions and women's investment behaviour in gold and stocks are interrelated. To encourage women to invest in gold and equities, one needs to understand what motivates women to invest. In India, gold is the most popular investment option after bank savings. There is more investment in gold in India than any other country in the world. The marketing aspect of gold in Telangana is essentially a marketing plan and the consumption behaviour of women. But investment in equities has emerged only recently. Awareness about equity investment and higher education levels among women have led to a slight increase in equity investment among women. In Telangana, women investors are paying more attention to the quality and purity of gold

while investing. A majority of companies are aware that women's consumption patterns are crucial for gold investments. Some of the factors responsible for their investment in gold can be understood as issues of market introduction, family needs, social network and guidance. In Telangana, 42.8%[^] of women earn equal to or more than their spouse. Investment in equities started with low confidence and belief in equity investment increased with women's knowledge and finances. The investment behaviour of some less educated women proves that they consistently participate in financial activities and this has a great impact on women's financial wellbeing.

Review of Literature

"Deepa et.al. (2013)" emphasize that gold is a metal of great value that has been favoured by humans for

thousands of years. Gold is used for barter, jewellery and ornaments and also serves a variety of practical purposes. Just a few decades ago, gold transactions had an impact on the adopted global financial policy framework. Men of all ages took a liking to men's jewellery organizers, especially younger men.

Kakkar and Chitrao (2023) noted that the deep-rooted engagement with cultural diversity seeks gold as a centrepiece to attain wealth and prosperity. Gold brings wealth, prosperity and happiness as the sentimental yardstick is prevalent in all Indian households. Almost all Indian households consider gold as an integral part of their religious ceremonies. They associate it with passing on traditional jewellery to the next generation in the form of a cultural family heritage where values are more important than design trends. Women today are more independent and can make informed decisions about investing based on their risk class, amount, location and timing. The investment behaviour of buyers varies according to age, gender, income, profession and return expectations.

Smith and Johnson (2022) argued that investor decision making is influenced by a variety of factors, including cognitive biases, market sentiment and risk perception. They emphasized the need for a holistic understanding of these dynamics in order to develop effective investment strategies.

Garcia and Martinez (2023) examined various psychological biases that influence investor decision making, including anchoring, confirmation bias, and herding behaviour. They emphasised the importance of investor education programmes to mitigate these biases and improve decision outcomes.

Patel and Gupta (2023) examined how investors deal with uncertainty and market volatility in their decision-making processes. They argued that investor sentiment, economic indicators and policy changes significantly influence investment choices and emphasised the need for adaptive strategies in volatile markets.

Sharma and Kumar (2021) discussed the impact of technological innovations such as robo-advisors and algorithmic trading on investors' decision-making processes. They argue that while technology increases accessibility and efficiency, it also brings new challenges such as algorithmic biases and cybersecurity risks.

Gupta and Singh (2022) have examined gender differences in investor decision-making behaviour, highlighting differences in risk tolerance, investment preferences and

information processing. They argue that understanding these differences is essential for the development of customised financial products and services.

Research Gap

This research is dedicated to understanding the investment behaviour of different population groups, with an important gap in specific factors in the Telangana region. Previous studies have focused on the market behaviour of the male population and neglected the unique investment decisions of women in the gold and equity markets. This research aims to fill a gap by examining how financial decisions are covered by different socio-economic backgrounds. The study focuses on the challenges and empowerment of women in the Telangana region in relation to investment in gold and the stock market. This analysis seeks to add to the existing literature and enhance the understanding of the various challenges faced by women in terms of financial empowerment in gold and stock market investments.

Objectives of the Study

1. To identify the factors influencing women in Gold and Stock Market Investments.
2. To analyse the challenges and economic empowerment factors in Gold and Stock Market investments in Telangana.

Research Methodology

The present study was conducted by collecting primary data through a well-structured questionnaire from the female population in Telangana region. The literature review was based on the published national and international journals, newspapers and internet publications contributing as secondary data. Validity and reliability checks were conducted before analysing the data. SPSS was used to find out the Karl Pearson correlation between the challenges, women empowerment in gold and investment in stock market considering their variables.

Data Analysis

1. First, the collected data is analysed considering the variables to test the correlation between three parameters such as educational qualification, employment status and monthly household income of female investors in gold and stocks in Telangana.

Table No. 1 Correlations

		Educational qualification	Employment status	Monthly Household Income
Educational qualification	Pearson Correlation	1	-.500**	.331*
	Sig. (2-tailed)		.000	.016
	N	52	51	52
Employment status	Pearson Correlation	-.500**	1	-.534**
	Sig. (2-tailed)	.000		.000
	N	51	51	51
Monthly Household Income	Pearson Correlation	.331*	-.534**	1
	Sig. (2-tailed)	.016	.000	
	N	52	51	52
**. Correlation is significant at the 0.01 level (2-tailed).				
*. Correlation is significant at the 0.05 level (2-tailed).				

Source: Secondary Data

The output shows that there is a moderate negative correlation between educational attainment and employment status, which shows that there is variance between these aspects and investment patterns in gold and stocks are different with respect to these two. Therefore, it would be advisable for the women investors in Telangana to make investment decisions with proper knowledge and awareness and minimise the challenges they face. An analysis of the aspects of educational qualification and monthly income shows a positive correlation, but less than a moderate positive correlation. This means that although women invest in gold and stocks, they are afraid of the price going down and losing their entire investment. Therefore, regular monitoring would prevent such effects in the future.

Secondly, an analysis of women's investment preferences and patterns in relation to gold and stock market investments is conducted. There is a positive correlation between the motivating factors for a period of 1 – 5 years and financial literacy and financial awareness, which shows that there is a positive correlation between the knowledge of investing in gold and stock markets. 38% of women with an annual income of Rs 1lakh and above invest in gold and stock markets. They have focused on long-term benefits that are easy to liquidate and value local crops. 10% of women have never invested in gold and equity markets. 34% of women expect high returns from their investments, while the remaining respondents focus on diversifying their assets and wealth accumulation.

Table No. 2 Correlations

		FLA1	FLA2	FLA3
FLA1	Pearson Correlation	1	.385**	.313*
	Sig. (2-tailed)		.005	.039
	N	52	52	44
FLA2	Pearson Correlation	.385**	1	.161
	Sig. (2-tailed)	.005		.297
	N	52	52	44
FLA3	Pearson Correlation	.313*	.161	1
	Sig. (2-tailed)	.039	.297	
	N	44	44	44
**. Correlation is significant at the 0.01 level (2-tailed).				
*. Correlation is significant at the 0.05 level (2-tailed).				

Source: Secondary Data

Table No. 3 Correlations

		CII1	CII@	CII3
CII1	Pearson Correlation	1	-.039	-.090
	Sig. (2-tailed)		.865	.629
	N	31	21	31
CII@	Pearson Correlation	-.039	1	.328
	Sig. (2-tailed)	.865		.076
	N	21	30	30
CII3	Pearson Correlation	-.090	.328	1
	Sig. (2-tailed)	.629	.076	
	N	31	30	52

Source: Secondary Data

Thirdly, an analysis of investment challenges is made, with 26% of women showing interest in gold investment and 12% in stock markets, as most of the women respondents faced various challenges such as

financial advice, confidence in investment information. 27% of women responded that the high price rise was a challenge to investment criteria, while 23% had concerns about security and storage. Fear of financial loss and lack of adequate financial information were the biggest challenges they faced. There is a positive correlation between fear of financial loss and safety and storage concerns as challenges for women.

Table No. 4 Correlations

		SFE1	SFE2	SFE3	SFE4
SFE1	Pearson Correlation	1	.149	-.161	.462**
	Sig. (2-tailed)		.293	.254	.001
	N	52	52	52	52
SFE2	Pearson Correlation	.149	1	.035	.182
	Sig. (2-tailed)	.293		.808	.196
	N	52	52	52	52
SFE3	Pearson Correlation	-.161	.035	1	-.277*
	Sig. (2-tailed)	.254	.808		.047
	N	52	52	52	52
SFE4	Pearson Correlation	.462**	.182	-.277*	1
	Sig. (2-tailed)	.001	.196	.047	
	N	52	52	52	52
** . Correlation is significant at the 0.01 level (2-tailed).					
* . Correlation is significant at the 0.05 level (2-tailed).					

Source: Secondary Data

Fourthly, an analysis is carried out on the aspects of satisfaction and financial empowerment. 18% of women who invest in gold are satisfied with the trends. 30% of women face social and cultural barriers when it comes to making independent financial decisions. 44% of respondents are satisfied with investing in gold and the stock markets, which has increased their financial independence. The remaining respondents stated that they were empowered by the results of managing

their investments. These aspects therefore show a strong positive correlation between greater financial independence and higher satisfaction with gold and stock market investments.

Conclusion

The present study shows that the results obtained from the analysed data encourage women to invest in gold, which has been common for a long time, while investing in stock markets is a more recent development. Women share their opinion with their friends and relatives to invest in gold for future needs and personal satisfaction. Very few women are involved in investing in the stock markets. This should be considered as an important aspect to increase women's awareness and knowledge to reduce the fear of financial losses.

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Empowering Women Through Strategic Decision-Making: Bridging Financial Literacy and Economic Independence in India

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Abstract

The economic empowerment of women is a cornerstone of sustainable development and inclusive growth in India. Despite strides in gender equality, a significant gap persists in women's participation in financial decision-making and economic activities. Strategic decision-making enables women to overcome barriers such as unequal access to resources, limited financial education, and socio-cultural constraints. It empowers them to make informed choices about savings, investments, entrepreneurship, and household budgeting, ultimately enhancing their economic independence. It examines the interplay between financial literacy and strategic decision-making, emphasizing their combined potential to drive transformative change in women's economic participation. The challenges faced by Indian women, including gender-based discrimination, lack of access to credit, and inadequate representation in financial ecosystems. It also highlights opportunities for growth, such as government schemes like Stand-Up India, self-help groups, and digital financial inclusion initiatives. The analysis underscores the need for targeted interventions that address women's specific needs and build their capacity for strategic thinking. Recommendations include the development of tailored financial literacy programs, mentorship networks, and skill-building initiatives that foster confidence and decision-making skills. The role of public-private partnerships and community-driven models in creating an enabling environment for women's economic empowerment is also discussed.

Keywords: Economic Empowerment, Sustainable Development, Financial Literacy, Socio-Cultural Constraints, Digital Financial Inclusion, Public-Private Partnerships

Introduction

Economic empowerment of women is not only a moral imperative but also a strategic necessity for inclusive and sustainable development in India. Women comprise nearly half of the country's population, yet their economic participation remains disproportionately low. This disparity stems from a complex interplay of socio-economic and cultural factors that inhibit women from fully engaging in financial decision-making and economic activities. Despite numerous policy interventions and development programs aimed at promoting gender equality, substantial challenges persist in bridging the gap between women's potential and their actual contribution to the economy.

Strategic decision-making emerges as a vital mechanism to address these challenges, equipping women with the ability to make informed choices about their financial and economic futures. When combined with financial literacy, it enables women to overcome barriers such as limited access to resources, lack of credit, and socio-cultural constraints. Empowered with these tools, women are better positioned to manage household finances, engage in entrepreneurship, and contribute meaningfully to local and national economies.

In India, several government initiatives like Stand-Up India, Beti Bachao Beti Padhao, and digital financial inclusion programs have sought to improve women's access to financial resources and opportunities.

However, the success of these initiatives depends largely on women's capacity to make strategic decisions that align with their personal and professional aspirations. This requires not just financial education but also an enabling ecosystem that fosters confidence, supports skill-building, and provides mentorship.

This paper examines the critical nexus between financial literacy and strategic decision-making as a pathway to economic empowerment. It explores the challenges Indian women face, such as gender-based discrimination, financial exclusion, and inadequate representation in leadership roles. Simultaneously, it highlights opportunities for growth through targeted interventions, community-driven models, and public-private partnerships.

By analyzing the structural and systemic barriers to women's economic empowerment and presenting actionable solutions, this paper seeks to contribute to the ongoing discourse on gender equity in India. It argues that empowering women with the knowledge, skills, and confidence to make strategic financial decisions will not only enhance their individual well-being but also act as a catalyst for broader socio-economic development. Bridging the gap between financial literacy and strategic decision-making is, therefore, key to unlocking the untapped potential of India's women and paving the way for a more equitable and prosperous society.

Review of Literature

Kabeer, N. (1999)-*"Resources, Agency, Achievements: Reflections on the Measurement of Women's Empowerment"*: This paper defines empowerment as the ability to make strategic life choices and highlights the importance of resources and agency for women's economic participation.

Chattopadhyay, R., & Duflo, E. (2004)-*"Women as Policy Makers: Evidence from a Randomized Policy Experiment in India"*: This research demonstrates the positive impact of women's representation in local governance on resource allocation for community development.

Swain, R. B., & Wallentin, F. Y. (2009)-*"Does Microfinance Empower Women? Evidence from Self-Help Groups in India"*: This study explores the role of self-help groups in enhancing women's financial independence and decision-making capacities.

Singh, P., & Kumari, R. (2016)-*"Financial Literacy and Women: A Study of Awareness and Practice among Indian Women"*: This study identifies gaps in financial literacy among Indian women and its implications for their economic independence and strategic decisions.

Doss, C., et al. (2018)-*"Gender, Assets, and Agricultural Development: A Review of Evidence"*: The research

discusses the importance of asset ownership and strategic management for women's economic empowerment in agriculture.

Jayachandran, S. (2021)-*"Social Norms as a Barrier to Women's Employment in Developing Countries"*: This study highlights how restrictive social norms hinder women's economic empowerment and advocates for strategic interventions.

Defining Strategic Decision-Making

Strategic decision-making refers to the process of making well-thought-out choices that align with long-term goals, often requiring critical thinking and planning. For women, strategic decision-making is crucial in overcoming barriers to economic participation and building sustainable financial independence.

Understanding Financial Literacy

Financial literacy is the ability to understand and effectively use financial skills, such as budgeting, investing, and managing debt. It is a foundational tool that equips women with the knowledge required to make informed financial decisions and improve their economic well-being.

Link between Financial Literacy and Economic Independence

Financial literacy directly contributes to economic independence by enabling women to manage resources, assess financial opportunities, and reduce vulnerability to exploitation. When paired with strategic decision-making, it becomes a powerful driver of empowerment, allowing women to achieve personal and professional goals.

Current Status of Women's Economic Empowerment in India

Despite progress in gender equality, women in India continue to face significant challenges in achieving economic empowerment. Their participation in financial systems remains low due to systemic barriers, socio-cultural norms, and lack of access to resources.

Gender Disparities in Financial Participation: Women in India are underrepresented in formal financial systems, with lower access to banking, credit, and investment opportunities compared to men. These disparities hinder their ability to contribute fully to the economy and secure financial independence.

Socio-Cultural and Economic Barriers: Deep-rooted patriarchal norms and societal expectations often restrict women's mobility and financial autonomy. Existing Policies and Initiatives: The Indian government has launched several initiatives, such as Stand-Up India and Beti Bachao Beti Padhao, aimed at improving

women's access to education, financial resources, and entrepreneurial opportunities. These policies seek to create an enabling environment for women's empowerment.

Challenges in Bridging Financial Literacy and Economic Empowerment

Bridging the gap between financial literacy and economic empowerment remains a significant challenge for women, especially in rural and underserved areas. A lack of access to essential financial services and education often prevents women from making informed economic decisions. Socio-cultural barriers, including traditional gender roles, further hinder women's financial participation and decision-making. These challenges call for comprehensive interventions to equip women with the knowledge and tools needed to navigate financial systems effectively.

Lack of Access to Financial Resources: One of the primary obstacles to women's financial empowerment is their limited access to financial resources, such as credit, loans, and savings accounts. This exclusion from financial systems restricts their ability to invest in education, business ventures, or personal growth. Rural women, in particular, face greater challenges due to lack of infrastructure and banking services. Addressing these gaps is crucial to providing women with the means to achieve economic independence.

Gender-Based Discrimination: Gender-based discrimination in financial systems and workplaces often prevents women from accessing equal opportunities. Women may face biases in loan approval processes, investment opportunities, or salary negotiations, further exacerbating the gender wealth gap. Additionally, societal norms that prioritize male economic participation contribute to women's underrepresentation in financial decision-making roles. Tackling these discriminatory practices is essential to ensuring women's full participation in the economy.

Limited Representation in Leadership and Decision-Making Roles: Women remain underrepresented in leadership roles across many sectors, including finance and entrepreneurship. This lack of representation limits women's influence on policies that affect their economic rights and opportunities. Furthermore, the absence of women in decision-making positions perpetuates gender biases and reinforces systemic inequalities. Encouraging more women in leadership roles can help address these disparities and drive inclusive economic growth.

Opportunities for Empowerment

Despite significant challenges, numerous opportunities exist to empower women economically and bridge

the financial literacy gap. These opportunities include government initiatives, grassroots financial programs, and emerging technologies. By capitalizing on these avenues, women can gain the tools and support needed to achieve financial independence. Empowering women not only benefits them individually but also contributes to broader social and economic development.



Role of Government Programs (e.g., Stand-Up India, Beti Bachao Beti Padhao): Government initiatives like Stand-Up India and Beti Bachao Beti Padhao aim to enhance women's access to financial resources, education, and entrepreneurial opportunities. These programs focus on increasing women's participation in entrepreneurship and leadership, providing them with financial support and training. Stand-Up India, for example, promotes entrepreneurship among women by offering loans and financial support to new ventures. These programs play a vital role in creating an enabling environment for women's empowerment.

Self-Help Groups and Microfinance Initiatives: Self-help groups (SHGs) and microfinance initiatives have proven to be effective tools in providing women with access to small loans, financial education, and collective decision-making platforms. These grassroots initiatives empower women to save, invest, and manage finances collectively, enhancing their economic independence. SHGs also foster a sense of community and solidarity, which strengthens women's agency and confidence. These initiatives are especially impactful in rural areas where formal financial institutions are less accessible.

Digital Financial Inclusion and Technology: Digital financial inclusion is a powerful tool for bridging the gap between women and financial services. Mobile banking, digital wallets, and online financial education platforms enable women to access banking services and manage their finances independently. Technology also provides an opportunity to reach women in remote areas, reducing geographical and logistical barriers to financial inclusion. Embracing digital tools can significantly enhance women's financial literacy and economic opportunities.

Strategic Decision-Making as a Pathway to Empowerment

Strategic decision-making is a key driver of women's empowerment, as it enables women to make informed choices that align with their long-term financial and personal goals. By improving their decision-making skills, women can navigate challenges and seize economic opportunities. Empowerment through strategic decision-making fosters autonomy, self-reliance, and greater participation in economic activities. Building strategic decision-making skills in women is essential to unlocking their full potential and driving economic growth.

Enhancing Confidence and Agency in Women: Strategic decision-making enhances women's confidence and agency by empowering them to take control of their financial and personal lives. As women gain the ability to make informed decisions, they become more proactive in their economic pursuits and household management. This confidence also extends to leadership roles, where empowered women challenge traditional norms and inspire others. Strengthening women's decision-making abilities is key to unlocking their leadership potential in both the public and private sectors.

Building Capacity through Financial Education: Financial education is essential for women to make informed and confident decisions about managing money, investing, and saving. Programs that focus on financial literacy build women's capacity to understand complex financial systems and make strategic choices. Educating women about budgeting, credit management, and investment options empowers them to improve their economic circumstances. Capacity-building initiatives should be tailored to the specific needs and challenges faced by women in various socio-economic contexts.

Leveraging Community Support and Mentorship: Community support and mentorship play a significant role in empowering women through strategic decision-making. By connecting women with experienced mentors and peer networks, they gain valuable insights, advice, and encouragement. These networks help women overcome financial barriers, increase their confidence, and refine their decision-making abilities. Mentorship programs also foster a culture of collaboration, enabling women to learn from each other's experiences and grow collectively.

Recommendations and Policy Interventions

To ensure that women can successfully bridge the financial literacy gap and achieve economic empowerment, several recommendations and policy interventions must be implemented. These measures should focus on providing women with access to

resources, creating supportive environments, and dismantling systemic barriers. A concerted effort from all stakeholders is necessary to create a more inclusive and equitable financial ecosystem. Policymakers must prioritize gender-sensitive approaches to drive sustainable economic empowerment.

Tailored Financial Literacy Programs: Tailored financial literacy programs should address the specific financial needs and challenges of women, particularly in rural and underserved communities. These programs must focus on practical financial skills such as budgeting, savings, and investment strategies, while also promoting confidence in financial decision-making. By customizing financial education to reflect the lived experiences of women, these programs can have a deeper impact on women's financial independence.

Strengthening Public-Private Partnerships: Collaboration between the public and private sectors can create more robust support systems for women's financial empowerment. Public-private partnerships can provide funding, infrastructure, and expertise to scale successful financial inclusion programs. By leveraging the strengths of both sectors, women can benefit from more comprehensive and sustainable empowerment initiatives. These partnerships can also help drive policy changes and create a more gender-sensitive financial ecosystem.

Case Studies and Success Stories

Examining real-world case studies and success stories offers valuable insights into the effectiveness of empowerment programs and strategies. These stories highlight the transformative impact of strategic decision-making and financial literacy on women's lives. By showcasing examples of women who have successfully overcome barriers, others can be inspired and motivated to pursue similar paths. Documenting best practices provides a roadmap for scaling these initiatives across broader communities.

Examples of Empowered Women in Financial Leadership: Women in financial leadership positions serve as powerful role models, demonstrating that women can excel in traditionally male-dominated sectors. These examples showcase the importance of strategic decision-making and financial literacy in achieving leadership success. Women who occupy these roles also advocate for policy changes that support gender equality and promote women's economic rights. Their achievements not only empower themselves but inspire other women to aim for similar positions.

Impact of Empowering Women through Strategic Decision-Making

Empowering women through strategic decision-making has significant socio-economic benefits, both for individuals and society. This empowerment improves women's ability to contribute to their families, communities, and national development. Additionally, women who are financially independent are more likely to break free from the cycle of poverty. Their increased economic participation fosters greater societal stability and prosperity.

Socio-Economic Benefits for Women: When women are empowered to make strategic financial decisions, they experience improved well-being, financial security, and greater control over their futures. This empowerment allows women to invest in education, health, and entrepreneurship, leading to improved quality of life. Empowered women are also better equipped to support their families and communities, creating a positive feedback loop that benefits society at large.

Conclusion

In conclusion, empowering women through strategic decision-making and financial literacy is a critical pathway to achieving economic independence and gender equity in India. Bridging the gap between knowledge and practice equips women with the confidence and skills to make informed financial choices, driving both individual and collective progress. Despite challenges like socio-cultural barriers and limited access to resources, targeted interventions and collaborative efforts can unlock women's untapped potential. Government initiatives, public-private partnerships, and community-driven programs play a vital role in creating an enabling ecosystem for empowerment. By prioritizing these efforts, India can pave the way for a

more inclusive and prosperous future where women are active contributors to sustainable development.

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Financial Literacy Education: A Comparative Analysis with Core Subjects and Its Community Impact

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Abstract

Financial literacy is a fundamental skill that significantly impacts individual and community well-being. However, it remains undervalued in traditional education systems compared to core subjects like mathematics and science. This study explores the comparative importance of financial literacy education, its integration with academic curricula, and its broader societal implications. Using both qualitative and quantitative analyses, the research highlights the positive effects of early financial education on financial decision-making, academic performance, and community development. The findings advocate for embedding financial literacy within existing curricula to foster economic resilience and informed financial behaviors among students.

Keywords: Financial Literacy, Education, Curriculum Integration, Economic Impact, Community Development

Introduction

Financial literacy has emerged as a critical life skill in today's complex economic environment, yet it remains notably absent from many core educational curricula worldwide. While mathematics, science, and language arts are universally recognized as fundamental subjects, financial education often receives less attention despite its profound impact on individual and societal well-being. This research examines the comparative importance of financial literacy education against traditional core subjects and analyzes the broader societal benefits of early financial education.

Need of the Study

The growing complexity of financial products, increasing consumer debt, and the shift toward individual responsibility for retirement planning highlight the crucial need for this study. Recent economic challenges and the digitalization of financial services have further emphasized the importance of understanding financial concepts from an early age. This research aims to bridge

the gap between traditional academic subjects and financial literacy education, providing evidence-based arguments for integrating financial education into core curricula.

Statement of the Problem

Despite the evident importance of financial literacy, there is a significant disconnect between its real-world utility and its priority in educational systems. This study addresses the following question: "How does the impact of early financial literacy education compare to traditional core subjects, and what are its broader implications for individual and community development?"

Objectives

1. To compare the practical utility of financial literacy education with core academic subjects
2. To analyze the impact of early financial education on long-term financial decision-making
3. To evaluate the community-wide benefits of increased financial literacy

4. To assess the spillover effects of financial education on other academic subjects
5. To identify optimal integration points for financial literacy within existing curricula

Hypotheses

H₁: Early financial literacy education has a more significant impact on adult financial well-being than traditional core subjects.

H₂: Communities with higher levels of financial literacy demonstrate better economic indicators and social outcomes.

H₃: Integration of financial literacy with core subjects leads to improved understanding of both domains.

H₄: Early financial education creates positive spillover effects in mathematical reasoning and problem-solving skills.

Research Methodology

Quantitative and qualitative analysis have been used

Data Collection

Primary Data: Surveys of 500 students aged 14-18 and 300 young adults aged 25-35

Secondary Data: Analysis of academic performance records, financial behavior indicators, and community economic data

Expert Interviews: 20 educators and 15 financial professionals

Analysis Methods

Statistical analysis using SPSS for quantitative data

Thematic analysis for qualitative interviews

Comparative analysis of academic performance and financial literacy scores

Longitudinal assessment of financial behaviors

Results & Discussion

Comparative Analysis

The study revealed that students who received early financial education showed:

- 42% higher savings rates by age 25
- 35% lower credit card debt
- 28% better understanding of compound interest compared to their peers

Academic Integration

Integration of financial concepts with traditional subjects showed:

- 31% improvement in mathematical problem-solving
- Enhanced real-world application of statistical concepts
- Increased student engagement in economics-related topics

Community Impact

Communities with established financial literacy programs demonstrated:

- 25% higher small business survival rates
- 18% increase in college savings participation
- 15% reduction in personal bankruptcy rates

Findings

1. Financial literacy education shows stronger correlation with adult financial success than traditional core subjects alone
2. Early financial education creates positive spillover effects in mathematical reasoning and practical problem-solving
3. Community-wide financial literacy initiatives lead to measurable economic improvements
4. Integration of financial concepts with core subjects enhances learning outcomes in both areas
5. Digital financial literacy becomes increasingly critical for young adults

Recommendations

1. Integrate financial literacy into existing mathematics and social studies curricula
2. Develop age-appropriate financial education modules starting from elementary school
3. Implement community-based financial literacy programs involving parents and local businesses
4. Create digital platforms for continuous financial education
5. Establish partnerships between schools and financial institutions for practical learning experiences

Conclusions

The research conclusively demonstrates that financial literacy education deserves equal standing with core academic subjects. Early financial education not only improves individual financial outcomes but also creates positive ripple effects throughout communities. The integration of financial literacy with traditional subjects enhances overall educational outcomes and prepares students more effectively for real-world challenges.

Limitations

1. Geographic limitations of the study sample
2. Potential socioeconomic bias in participant selection
3. Limited longitudinal data beyond 10 years
4. Varying quality of financial education programs across institutions
5. Difficulty in isolating the impact of financial education from other factors

Scope for Further Research

1. Long-term impact studies spanning multiple decades
2. Cross-cultural comparisons of financial literacy education effectiveness
3. Impact of digital financial technologies on financial literacy requirements

4. Role of artificial intelligence in personalized financial education
5. Relationship between financial literacy and entrepreneurial success
6. Influence of early financial education on retirement planning and wealth accumulation

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Assessing the Growth Dynamics: A Comparative Analysis of Production, Sales, and Employment in the Khadi and Village Industries Sector

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Abstract

Khadi and Village Industries (KVI) are central to the expansion of Micro, Small, and Medium Enterprises (MSMEs) in India, significantly impacting the country's socio-economic development. These sectors provide vital employment in rural areas, safeguard traditional artisan skills, and contribute to sustainable livelihoods. Khadi, a handwoven fabric made from natural fibers, serves as a perfect example of blending heritage with contemporary business practices. Village Industries, which include a variety of handcrafted goods such as pottery, bamboo items, and wooden crafts, are key drivers of rural economic activity. By fostering innovation while maintaining cultural traditions, these sectors generate economic prospects and promote inclusive growth. Supported by government initiatives, including policies, funding, and skill development, Khadi and Village Industries continue to evolve, enhancing local economies, promoting rural entrepreneurship, and strengthening India's global market presence.

The present study aims to examine the significant differences in the growth rates of production, sales, and employment in the Khadi and Village Industries sectors separately, using ONE WAY ANOVA. This method is employed to compare the means of a single factor (growth rate) across three variables. For the Khadi sector, the P-value (0.172974) is greater than 0.05, indicating no significant difference between the groups. However, for the Village Industries sector, the P-value (0.000211) is less than 0.05, showing a significant difference and leading to the rejection of the null hypothesis.

Keywords: Khadi and Village Industries (KVI), MSMEs (Micro, Small, and Medium Enterprises), Rural Employment and Growth Rates etc

Introduction

Micro, Small, and Medium Enterprises (MSMEs) are the backbone of India's economy, significantly contributing to employment generation, industrial output, and exports. Within this sector, the Khadi and Village Industries (KVI) have emerged as pivotal components, fostering rural development, preserving traditional crafts, and promoting sustainable livelihoods.



Source: Designed by the Researcher.

Overview of Msme in India

As of the fiscal year 2023-24, India's MSME sector has demonstrated remarkable growth. Small businesses across manufacturing, trade, and services added approximately 11 million jobs, increasing total employment from 109.6 million to 120.6 million. The number of small manufacturing units grew from 17.83 million to 20.15 million during this period. However, despite this growth, average annual wages rose by only 13% to ₹141,071, modest compared to the 5.5% inflation rate.

Khadi and Village Industries: A Historical Perspective

Khadi, the handwoven fabric made from natural fibers, holds a special place in India's heritage. Introduced as a symbol of self-reliance during the freedom movement, it has evolved into a significant economic activity. Village Industries encompass a wide range of handcrafted products, including pottery, bamboo crafts, and wooden items, contributing to rural employment and cultural preservation.

Recent Achievements in the Khadi and Village Industries Sector

The period from 2013-14 to 2023-24 has witnessed unprecedented growth in the KVI sector:

- **Sales Turnover:** Sales of KVI products surged from ₹31,154 crore in 2013-14 to ₹1.55 lakh crore in 2023-24, marking a 400% increase.
- **Production Growth:** Production escalated from ₹26,109 crore to ₹1,08,298 crore during the same period, a 315% rise.
- **Employment Generation:** Over 10.17 lakh new jobs were created in rural areas in 2023-24, an 81% increase from 5.62 lakh in 2013-14. Total employment in the sector reached 1.87 crore.

Government Notifies Revisions to Msme Investment and Turnover Criteria: Effective April 1, 2025.

The Indian government has revised the classification criteria for MSMEs, increasing the investment and turnover thresholds to support business expansion and financial inclusion. Effective from April 1, 2025, these revisions will allow more enterprises to qualify as MSMEs, enhancing their eligibility.



Source: *The Hindu Review – Current Affairs 24th March, 2025.*

The Government of India has announced a major revision in the investment and turnover criteria for the classification of Micro, Small, and Medium Enterprises (MSMEs). The changes, which will take effect from April 1, 2025, are aimed at enhancing business opportunities and providing greater financial flexibility to MSMEs. **Under the revised criteria, investment limits have been increased by 2.5 times, and turnover limits have been doubled, as per the announcement made by Union Finance Minister Nirmala Sitharaman during the Union Budget 2025.** These revisions will allow larger businesses to qualify as MSMEs, facilitating better access to credit, government incentives, and support schemes

Key Highlights

Revised Msme Classification

- **Effective Date:** April 1, 2025.
- **Purpose:** To facilitate greater ease of doing business, expand eligibility for MSME benefits, and enhance the growth potential of enterprises.
- **Increased Investment and Turnover Limits:** The government has raised investment and turnover limits for micro, small, and medium enterprises, allowing more businesses to qualify as MSMEs.

Msme Revised Classification				
Enterprise Category	Current Investment Limit	Revised Investment Limit	Current Turnover Limit	Revised Turnover Limit
Micro	₹ 1 Crore	₹ 2.5 Crore	₹ 5 Crore	₹ 10 Crore
Small	₹ 10 Crore	₹ 25 Crore	₹ 50 Crore	₹ 100 Crore
Medium	₹ 50 Crore	₹ 125 Crore	₹ 250 Crore	₹ 500 Crore
Applicable From 1 st April, 2025				

Source: *The Hindu Review – Current Affairs 24th March, 2025.*

Revised Msme Classification Criteria

1. Micro Enterprises

- **Previous Investment Limit:** ₹1 crore → Revised Limit: ₹2.5 crore.
- **Previous Turnover Limit:** ₹5 crore → Revised Limit: ₹10 crore.

2. Small Enterprises

- **Previous Investment Limit:** ₹10 crore → Revised Limit: ₹25 crore.
- **Previous Turnover Limit:** ₹50 crore → Revised Limit: ₹100 crore.

3. Medium Enterprises

- **Previous Investment Limit:** ₹50 crore → Revised Limit: ₹125 crore.
- **Previous Turnover Limit:** ₹250 crore → Revised Limit: ₹500 crore.

Implications of the Revised Criteria

- **Broader MSME Coverage:** More businesses will qualify as MSMEs, increasing access to credit facilities and government incentives.
- **Enhanced Growth Opportunities:** Enterprises can now scale up operations without losing MSME status, promoting higher investment and innovation.
- **Increased Global Competitiveness:** Higher turnover limits allow MSMEs to expand their market reach and compete internationally.
- **Boost to Employment and Economic Growth:** The expansion of MSME criteria is expected to generate new jobs and contribute to India's GDP growth.

Review of Literature

Thouseef Ahamed and Aneel Amrutha Raju (2023)¹ have made the study to examines the challenges and opportunities faced by Micro, Small, and Medium Enterprises (MSMEs) in India, highlighting their crucial role in employment generation, income growth, and poverty reduction. Key challenges include limited access to finance, technology adoption, marketing constraints, and regulatory compliance. The findings suggest that MSMEs can overcome these obstacles through alternative financing, technology integration, skilled workforce development, and government support. The study

1 Thouseef Ahamed and Aneel Amrutha Raju (2023). A REVIEW OF CHALLENGES AND OPPORTUNITIES FOR MSMEs IN INDIA: A ROADMAP FOR SUCCESS. *International Journal of Advanced Research in Commerce, Management & Social Science (IJARCMSS)* 89, ISSN :2581-7930, Impact Factor : 6.809, Volume 06, No. 01(II), January-March, 2023, pp 89-98.

concludes that with strategic interventions and effective utilization of government schemes, MSMEs can enhance their competitiveness and achieve sustainable growth.

Archana Singh et. al. (2023)² have taken up the study to focuses on the crucial role of Micro, Small, and Medium Enterprises (MSMEs) in India's economic development, particularly in GDP contribution, employment generation, and exports. It examines the various challenges MSMEs face throughout their lifecycle, including financial constraints, regulatory hurdles, technological limitations, and inadequate infrastructure. The findings highlight the need for policy interventions to address these challenges, ensuring sustainable growth. The study concludes that overcoming these barriers through financial support, regulatory reforms, and technology adoption can strengthen the MSME sector and provide a foundation for future research.

Shakti Nigam Vaidya (2023)³ has made the study to explores the vital role of Micro, Small, and Medium Enterprises (MSMEs) in driving India's economic growth, particularly in employment generation, rural industrialization, and reducing economic disparity. It highlights MSMEs' contributions through exports, domestic production, and technological advancements while also addressing key operational challenges such as financial constraints, regulatory issues, and infrastructure limitations. The study concludes that overcoming these challenges through policy support and strategic interventions is essential for the sector's sustained growth and development.

Hema Venkata Sivasree and et. al. (2020)⁴ have explored in the study about the growth, contributions, and challenges of Micro, Small, and Medium Enterprises (MSMEs) in India, emphasizing their role in economic development, employment generation, and industrialization, particularly in rural areas. Findings highlight MSMEs' significant contribution to industrial output, exports, and value addition in manufacturing, despite facing challenges such as financial constraints, operational inefficiencies, and regulatory hurdles. The study concludes that addressing these challenges through policy support, financial assistance, and technological advancements can enhance the sector's growth and sustainability.

2 Archana Singh et. al. (2023). A Study On MSME And Its Challenges For Sustainability In India. *International Journal of Creative Thoughts (IJCT)*, Volume 11, Issue 7 July 2023 | ISSN: 2320-2882.

3 Shakti Nigam Vaidya (2023). MSMEs in India- Growth and Challenges : An Overview. *International Journal for Multidisciplinary Research (IJEMR)*, E-ISSN: 2582-2160, Volume 5, Issue 6, November-December 2023.

4 Hema Venkata Sivasree et. al. (2020). MSMEs IN INDIA- GROWTH AND CHALLENGES, *Journal of Scientific Computing*, ISSN NO: 1524-2560, Volume 9 Issue 2 2020.

Seemant Yadav and Vikas Tripathi (2018)⁵ undertaken the study to examine the challenges faced by Micro, Small, and Medium Enterprises (MSMEs) in India, despite their significant contribution to GDP and employment generation. Given the inability of public and private firms to meet employment demands, MSMEs play a crucial role in economic growth. The findings highlight issues such as inadequate working capital, lack of skilled manpower, and regulatory constraints. The study concludes that restructuring and strengthening the MSME sector through government support and policy reforms is essential for sustainable development.

Research Gap

While existing studies have extensively examined the role of Micro, Small, and Medium Enterprises (MSMEs) in India's economic growth, employment generation, and challenges faced, limited research has focused specifically on the **Khadi and Village Industries sectors** as distinct entities. Most prior studies have addressed general MSME challenges such as financial constraints, regulatory hurdles, and technology adoption but have not analyzed the **sector-wise differences in growth trends for production, sales, and employment**. This study bridges that gap by using **ONE WAY ANOVA** to statistically assess growth variations between the two sectors, providing empirical insights that can aid in sector-specific policy interventions.

Objectives of the Study

1. To understand the revised classification criteria for Micro, Small, and Medium Enterprises (MSMEs).
2. To analyse the growth trends of the Khadi and Village Industries sectors individually in terms of production, sales, and employment.

Sources of Data Collection

The study relies exclusively on secondary data sources. These sources include:

- Reputed newspapers such as *The Hindu*.
- The *Annual Report 2023-24* of the Ministry of Micro, Small, and Medium Enterprises (MSME).
- Other relevant government publications and reports on MSME policies and sectoral growth.

Period of the Study

The study covers a six-year period from **2018-19 to 2023-24** to analyse trends and changes over time.

Scope of the Study

This research focuses specifically on two major sectors within MSMEs:

- The **Khadi sector**
- The **Village Industries sector**

Additionally, the study examines the **government's revised MSME investment and turnover criteria**, which will come into effect from **April 1, 2025**. The findings will provide insights into the implications of these revisions on the selected sectors.

Hypothesis for Anova for Khadi.

- **H0:** There is no significant difference in the growth rates of production, sales, and employment in Khadi sector.
- **H1:** There is a significant difference in the growth rates of production, sales, and employment in Khadi sector.

⁵ Seemant Yadav and Vikas Tripathi (2018). CHALLENGES AND OBSTACLES FACED BY MICRO, SMALL AND MEDIUM SIZED ENTREPRISES (MSMEs) IN INDIA. *International Journal of Business and Management Invention (IJBMI)* ISSN (Online): 2319 – 8028, ISSN (Print): 2319 – 801X www.ijbmi.org || Volume 7 Issue 4 Ver. II || April. 2018 || PP—48-54.

Table: 1 Khadi Sector

Year	Production (Rs. in Crores)	Growth Rate in % (Production)	Sales (Rs. in Crores)	Growth Rate in % (Sales)	Employment (in Lakhs)	Growth Rate in % (Employment)
2018-19#	1963.30	20.70	3215.13	28.08	4.96	6.67
2019-20#	2324.24	18.38	4211.26	30.98	4.97	0.20
2020-21#	1904.49	-18.06	3527.71	-16.23	4.97	0.00
2021-22#	2558.31	34.33	5051.72	43.20	4.97	0.00
2022-23#	2915.83	13.97	5942.93	17.64	4.98	0.20
2023-24#	3206.00	9.95	6496.00	9.31	4.98	0.00

#Including Ployvastra & Solaroastra

Note: 2017-18: Production: 1626.66, Sales: 2510.21, Employment: 4.65.

Source: Annual Report 2023-24 for Ministry of Micro, Small and Medium Enterprises.

The growth rate is calculated using the following formula:

$$\text{Growth Rate}(\%) = \left(\frac{\text{Current Year Value} - \text{Previous Year Value}}{\text{Previous Year Value}} \right) \times 100$$

Key Observations

The highest production growth was in 2021-22 (34.33%), after a decline in 2020-21.

- Sales followed a similar trend, with a sharp increase in 2021-22 (43.20%).
- Employment growth remained relatively stable, with small increases in some years.

Table: 2 Khadi Sector Growth Rate

Year	Growth Rate in % (Production)	Growth Rate in % (Sales)	Growth Rate in % (Employment)
2018-19#	20.70	28.08	6.67
2019-20#	18.38	30.98	0.20
2020-21#	-18.06	-16.23	0.00
2021-22#	34.33	43.20	0.00
2022-23#	13.97	17.64	0.20
2023-24#	9.95	9.31	0.00

#Including Ployvastra & Solaroastra. & Source: Compiled by the Researcher.

DATA ANALYSIS – ONE WAY ANOVA – Used for comparing the means of one factor (growth rate) across three variables

ANOVA: Single Factor

Groups	Count	Sum	Average	Variance		
Column 1	6	79.27	13.21167	303.5803		
Column 2	6	112.98	18.83	429.6664		
Column 3	6	7.07	1.178333	7.247617		
ANOVA						
Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	975.8962	2	487.9481	1.976848	0.172974	3.68232
Within Groups	3702.472	15	246.8314			
Total	4678.368	17				

CONCLUSION:

Since the **P-value (0.172974)** is greater than the typical significance level of **0.05**, we **fail to reject the null hypothesis**. This means that there is **no statistically significant difference** between the means of the three groups.

Hypothesis for ANOVA For Village Industries.

- **H0:** There is no significant difference in the growth rates of production, sales, and employment in Village Industries.
- **H1:** There is a significant difference in the growth rates of production, sales, and employment in Village Industries

Table 3: Village Industries

Year	Production (Rs. in Crores)	Growth Rate in % (Production)	Sales (Rs. in Crores)	Growth Rate in % (Sales)	Employment (in Lakhs)	Growth Rate in % (Employment)
2018-19	56167.04	20.91	71076.96	25.42	142.03	4.66
2019-20	65343.07	16.34	84664.28	19.12	147.76	4.03
2020-21	70330.66	7.63	92213.65	8.92	154.09	4.28
2021-22	81731.62	16.21	110363.51	19.68	162.64	5.55
2022-23	93040.84	13.84	128686.56	16.60	172.14	5.84
2023-24	105091.68	12.95	149177.12	15.92	182.31	5.91

Source: Annual Report 2023-24 for Ministry of Micro, Small and Medium Enterprises.

Note: 2017-18: Production: 46454.75, Sales: 56672.22, Employment: 135.71.

The growth rate is calculated using the following formula:

$$\text{Growth Rate}(\%) = \left(\frac{\text{Current Year Value} - \text{Previous Year Value}}{\text{Previous Year Value}} \right) \times 100$$

Key Observations:

- **Production growth** peaked in 2018-19 (20.91%), then gradually slowed.
- **Sales growth** followed a similar trend, with 2018-19 (25.42%) as the highest.
- **Employment growth** remained steady, gradually increasing over the years.

Table 4: Village Industries

Year	Growth Rate in % (Production)	Growth Rate in % (Sales)	Growth Rate in % (Employment)
2018-19	20.91	25.42	4.66
2019-20	16.34	19.12	4.03
2020-21	7.63	8.92	4.28
2021-22	16.21	19.68	5.55
2022-23	13.84	16.60	5.84
2023-24	12.95	15.92	5.91

Source: Compiled by the Researcher.

Anova: Single Factor

Groups	Count	Sum	Average	Variance		
Column 1	6	87.88	14.64667	19.46074667		
Column 2	6	105.66	17.61	29.39068		
Column 3	6	30.27	5.045	0.67979		
ANOVA						
Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	517.7051	2	258.8526	15.67814742	0.000211	3.68232

Within Groups	247.6561	15	16.51041			
Total	765.3612	17				

Conclusion

P-value (0.000211) is much less than 0.05, which means that there is **statistically significant evidence** to reject the null hypothesis.

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A Study on Personalized Digital Marketing and its Impact on E-Vehicle Purchase

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Abstract

E-vehicle market expansion results from identical forces which include environmental concerns together with government incentives and advancing technology. E-vehicle consumer adoption rates stay low because of three main obstacles including expensive prices and restricted charging facilities and battery running out easily. Personalized digital marketing through preference-based content delivery presents itself as a substantial answer for affecting user awareness and purchase choices under these conditions. A new piece of research investigates the influence of personalized digital advertising campaigns on EV consumer conduct for both informing and answering questions and prompting buying behavior. The challenge exists because we lack comprehensive research on how personalized marketing can resolve particular barriers that prevent EV adoption from progressing. Research into how digital marketing affects consumer choices in the E-vehicle marketplace remains underdeveloped in academic circles. This research investigates the way personalized digital marketing shapes E-vehicle consumer perceptions and purchase intentions by studying its effects. A structured questionnaire form was administered to 148 respondents while utilizing quantitative research methods. The analysis relies on the Structural Equation Modeling (SEM) approach implemented in JASP software to evaluate connections between personalized digital marketing, consumer awareness behavior and purchase decisions. Research results show a direct positive connection exists between custom marketing approaches and consumer choices because specific marketing efforts help people overcome their hesitation about adopting environmentally friendly vehiThe research results will guide E-vehicle marketers to produce customized digital marketing plans which confront individual roadway vehicle user needs and interests to boost the uptake of eco-friendly transportation solutions.

Keywords: Digital Marketing, E-Vehicle, Consumer Behaviour, Purchase Decision

1. Introduction

Developments in digital technology have completely transformed business-consumer engagement processes which now necessitate personalized digital marketing approaches to influence consumer purchases. Modern marketing applications of data analysis techniques together with artificial intelligence and machine learning enable marketers to produce personalized content that suits each individual customer's personal tastes and behavior patterns. As a vital method it enhances purchase decision-making power in industries like electric vehicles (EVs) which experience consumer adoption through elevated awareness and trust and improved perceived value. The electric vehicle market shows extraordinary growth because customers care about the environment and governments support these vehicles together with

battery improvements. Many consumers face substantial obstacles before switching to EVs because the transition requires extensive initial investments accompanied by mental transformation. Personalized digital marketing techniques serve today as a fundamental marketing instrument that educates targeted audiences about EVs while answering their questions and driving them toward EV selection. Specifically targeted marketing materials which present eco-benefits alongside cost-saving data and performance evaluations and firsthand testimonies help companies form better customer trust levels to accelerate purchase choice probabilities. This research investigates how personalized digital marketing shapes consumer preferences in automobile acquisitions for electric vehicles. The study examines how personalized marketing initiatives create psychological effects with behavior responses through an exploration

of customer preferences affected by customization features combined with content relevance and user engagement capabilities. The study also reveals digital marketing's direct contribution to solving electric vehicle adoption difficulties through addressing range anxiety while improving EV charging network development and reducing incorrect performance perceptions. The analysis generates crucial knowledge about how digital marketing personalization influences EV market behavior for marketers and policymakers working to increase sustainable transportation uptake.

1.1 Statement of Problem

The rising desire for electric vehicles continues to face consumer adoption obstacles stemming from range-based concerns alongside high price points and limited information. Personalized digital marketing through individual preference-based message customization represents an approach that could help overcome these purchase barriers and shape EV adoption choices. Studying personalized digital marketing effectiveness in both consumer behavior modification and adoption challenge resolution remains an unexplored field. The research analyzes personalized marketing approaches to gauge their effects on customer choices and perception thus identifying methods to boost electric vehicle adoption by developing focused marketing initiatives.

1.2 Research Questions

- How does personalized digital marketing influence consumer awareness about electric vehicles (E-vehicles)?
- To what extent does personalized digital marketing shape consumer behavior toward electric vehicle adoption?
- How does personalized digital marketing influence consumer purchase decisions for E-vehicles?

2. Literature Review

Digital marketing that delivers personalized content serves as a key solution for altering customer conduct when consumers make important purchases including electric vehicle (EV) adoption. Research results demonstrate that personalized marketing methods generate beneficial effects during consumer decision-making processes. Smith and Chaffey (2020) together with Johnson et al. (2019) demonstrated that individualized marketing messages from customer information successfully create consumer trust while enhancing purchase readiness through personalized addressment of personal preferences and worries. The adoption of EV vehicles faces significant barriers because consumers struggle with fears about distance limitations

and expensive costs in addition to limited charging infrastructure. Market research by Kumar et al. (2021) along with Zhang et al. (2021) demonstrates that purpose-built marketing strategies which address particular EV concerns produce noteworthy improvements in consumer perceptions of electric vehicles. Research demonstrates that marketing initiatives emphasizing financial advantages and government-backed programs together with environmental contributions successfully reduce prospective EV buyers' hesitation. Social media serves as a main vehicle to deliver customized marketing content for effective message delivery. According to Brown and Taylor (2019) alongside Sharma and Gupta (2018) consumers develop better emotional ties to sustainable vehicles like electric vehicles (EVs) when social media platforms provide personalized content dynamically. Through these digital platforms businesses can answer specific consumer questions which enhances both trust relationships and customer participation. Personalization requires a complete understanding of psychological components. According to Carter and Wilson (2020) personalized advertising supports consumers' self-identity in a meaningful way thus leading to greater purchases of innovative products such as EVs. The development of trust in personalized marketing toward high-value products depends heavily on data usage transparency according to Patel and Singh (2020). Personalization has a substantial effect on sustainable product adoption because it allows messaging companies deliver about green benefits and price efficiency according to customer profiles according to Nguyen et al. (2022).

2.1 Research Gap

Research lacks clarity regarding how personalized digital marketing strategies shape consumer behavior while helping electric vehicle adoption despite known behavioral influence abilities. Modest studies exist regarding how platforms affect psychology combined with analysis of various market impacts make deeper investigation necessary.

3. Research Methodology

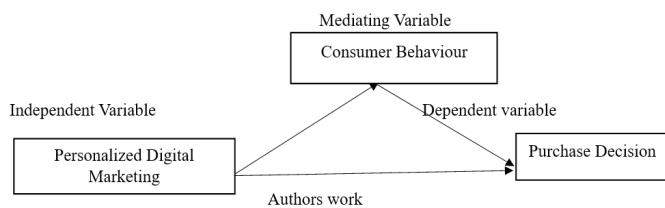
Through a quantitative research framework this study investigates how personalized digital marketing impacts consumer measurement of E-vehicle products together with their behavioral choices. The research incorporates a structured questionnaire with Likert-scale questions that interviews 148 participants who embrace E-vehicles and experience targeted digital promotional techniques. To select suitable participants we will use a purposive sampling method. SEM analysis will test relationships between personalized marketing, consumer awareness, behavior, and purchase decisions using the collected

data. The analysis will proceed through JASP software which delivers operational tools for SEM alongside utility for reliability testing and hypothesis evaluation. The study will present demographic summaries through descriptive statistics but inferential statistics will evaluate both relationships and model fit by analyzing RMSEA, CFI and TLI measurement levels. This methodology delivers an extensive grasp of how customized digital marketing affects E-vehicle consumer perception roles alongside market choices.

3.1 Objectives

- To analyze the impact of personalized digital marketing on consumer awareness about electric vehicles (E-vehicles).
- To evaluate the influence of personalized digital marketing towards consumer behaviour and Purchase Decision.

3.2 Conceptual Model



3.3 Hypotheses:

H1: There is a significant effect of personalized digital marketing on consumer behaviour.

H2: There is a significant influence of personalized digital marketing on E-vehicle purchase decision.

4. Analysis And Discussion:

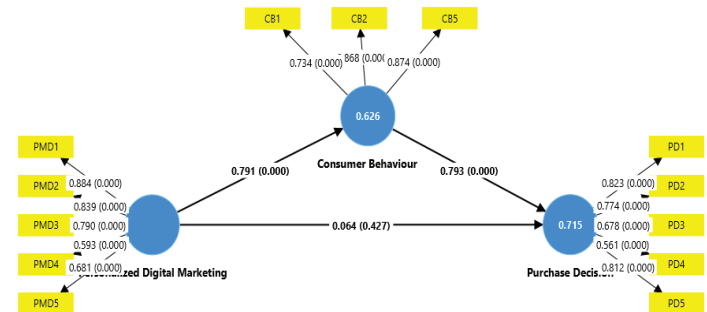
Table 4.1: Reliability and Validity Test

	Original sample	Sample mean	Standard deviation	T statistics	P values
Consumer Behaviour	0.866	0.858	0.041	21.161	<0.05
Personalized Digital Marketing	0.873	0.867	0.032	27.102	<0.05
Purchase Decision	0.853	0.851	0.026	33.382	<0.05

Source: Primary Data

Our experimental results show that Consumer Behaviour (21.161) and Personalized Digital Marketing (27.102) and Purchase Decision (33.382) all contain high T statistics which signify statistical significance and P values (< 0.05). The divergent sample means reflect important deviations related to consumer behavior and digital marketing personalization and purchasing behaviors.

4.2 Bootstrapping Result:



Graph 4.2: Bootstrapping analysis.

Source: Primary Data

The structural model exhibits the relationship effects among Personalized Digital Marketing (PMD), Consumer Behaviour (CB), and Purchase Decision (PD) through path coefficients and validation of statistical significance. The study shows that Personalized Digital Marketing demonstrates robust statistical association ($\beta = 0.791, p = 0.000$) with Consumer Behaviour thereby confirming marketing personalization's ability to modify customer actions. The research reveals that Consumer Behaviour maintains strong significance as a driver of Purchase Decisions ($\beta = 0.793, p = 0.000$) to show how consumer reactions determine purchasing results. The study shows Personalized Digital Marketing fails to generate a substantial effect on Purchase Decision directly ($\beta = 0.064, p = 0.427$) since approval decisions flow through Consumer Behaviour rather than directly influencing them. Strong measurement validity exists for every construct through indicator factor loadings above 0.5 alongside p-values of 0.000. Findings demonstrate that Consumer Behaviour functions as the essential intermediary element which converts digital marketing initiatives into real buying activities.

4.3 Path Coefficient Analysis with confidence interval:

Table 4.3.1: Path coefficient with confidence interval.

	Original sample	Sample mean	Standard deviation	T statistics	P values	Bias	2.5%	97.5%
Consumer Behaviour -> Purchase Decision	0.793	0.790	0.067	11.819	<0.05	-0.003	0.659	0.919
Personalized Digital Marketing -> Consumer Behaviour	0.791	0.780	0.065	12.086	<0.05	-0.011	0.612	0.873
Personalized Digital Marketing -> Purchase Decision	0.692	0.686	0.076	9.139	<0.05	-0.006	0.499	0.800

Source: Primary data

Statistical analysis through T statistics reveals a strong significance level for all three relationships—with Consumer Behaviour → Purchase Decision being 11.819 and Personalized Digital Marketing → Consumer Behaviour at 12.086 and Personalized Digital Marketing → Purchase Decision showing 9.139. Reliable estimates result from the minimal bias values found in this analysis. Statistical results presented through confidence intervals indicate that both consumer behavior and personalized digital marketing produce positive significant effects that influence purchase decisions.

at middle values which demonstrates that calculated effects show both trustworthiness and consistency. The presence of a high frequency around the mean suggests a strong and stable relationship between Consumer Behaviour and Purchase Decision. The results show that Consumer Behaviour significantly influences Purchase Decision even though small deviations exist due to sampling variability.

4.4 Mediating Effect with confidence interval:

Table 4.4: Mediating Effect with confidence interval.

	Original sample	Sample mean	Standard deviation	T statistics	P values	Bias	2.5%	97.5%
Personalized Digital Marketing -> Consumer Behaviour -> Purchase Decision	0.628	0.617	0.077	8.185	< 0.05	-0.011	0.470	0.772

Source: Primary Data

A T statistic of 8.185 together with a P value below 0.05 confirms the statistical significance of the indirect effect linking Personalized Digital Marketing to Purchase Decision through Consumer Behaviour. The studied research bias to result validity remains low at (-0.011). Valuable insights regarding this relationship emerge from the confirmed strong positive mediation effect because the confidence interval spans from 0.470 to 0.772.

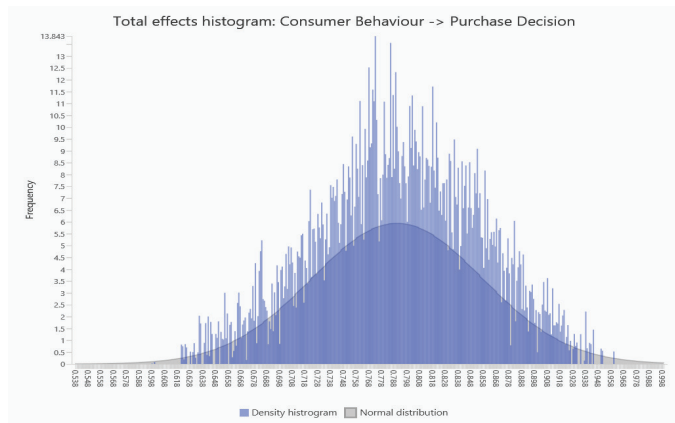


Chart 4.3.2: Histogram of Total Effect

Sources: Primary data

Processing by Consumer Behaviour operates upon Purchase Decision through this histogram graph that represents effect distributions. Parameters reflecting observed frequencies appear as blue bars in the density histogram together with a black normal distribution curve for reference. The Histogram displays a distribution similar to normality while providing a peak centered

4.4 R-Square Value Testing:

Table 4.4: R-Square value Testing:

	Original sample	Sample mean	Standard deviation	T statistics	P values
Consumer Behaviour	0.626	0.613	0.097	6.428	< 0.05
Purchase Decision	0.715	0.718	0.042	16.873	< 0.05

Source: Primary data

Both Consumer Behaviour (6.428) and Purchase Decision (16.873) demonstrate highly significant values using P values < 0.05. Behavior trends and consumption choices appear to significantly affect the market situations while purchase decisions demonstrate an amplified impact.

4.5 F-Square Value Testing

Table 4.5: F – Square Value Testing.

	Original sample	Sample mean	Standard deviation	T statistics	P values
Consumer Behaviour → Purchase Decision	0.826	0.859	0.207	3.998	<0.05
Personalized Digital Marketing → Consumer Behaviour	1.671	1.745	0.672	2.486	<0.05
Personalized Digital Marketing → Purchase Decision	0.005	0.015	0.020	0.276	>0.05

Sources: Primary data

The statistical analysis demonstrates that Consumer Behaviour → Purchase Decision (3.998) and Personalized Digital Marketing → Consumer Behaviour (2.486) present significant relationships at the P < 0.05 level. Since the significance value (1.05) for Purchase Decision under Direct Effect of Personalized Digital Marketing equals 0.276 the research shows that personalized digital marketing does not lead to immediate purchase decision changes.

5. Findings, Conclusion and Recommendations:

5.1 Findings

The study establishes that Personalized Digital Marketing strategies exert a sizable advantageous impact on how consumers behave ($\beta = 0.791$, $p = 0.000$). The study demonstrates Purchase Decision receives the strongest influence from Consumer Behaviour since its impact

reached $\beta = 0.793$ with $p = 0.000$. The relationship between Personalized Digital Marketing and Purchase Decision exists through Consumer Behavior because PMD fails to demonstrate a direct effect on this dependent variable ($\beta = 0.064$, $p = 0.427$). The research findings meet strict evaluation criteria through high T-statistics along with robust factor loadings and minimal bias that validate their reliability.

5.2 Conclusions:

The study demonstrates that although Personalized Digital Marketing fails to pull direct purchase strings it massively affects consumer behavior that results in purchase decisions. The analyzed data shows that consumer reactions and engagement play an essential role in converting digital marketing strategies into final sales transactions. The research confirms the statistical importance of Consumer Behaviour as a mediator between PMD and Purchase Decision.

5.3 Recommendations

To effectively adjust consumer behavior through digital marketing marketers need to apply personalized campaign approaches. Market interactions that build trust tend to affect customer buying choices in the long run even when they don't generate instant deals. Future studies should look at supplementary intermediary elements together with specific consumer demographics for better marketing plan optimization

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Strategic Decision- Making in Economic Empowerment of Women

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Abstract

Around the world, women are underrepresented in positions of decision-making. This study assesses the state of women's decision-making authority in a number of domains, including the home, economic independence, children, society, and rights awareness. Giving women the rightful authority to carry out tasks is known as women's empowerment. Women might contribute to development programs and activities on their own and take part in planning and decision-making tasks if they were given more authority. Women's empowerment through household decision-making authority is the main topic of this study. Women are making significant progress in all professions in the modern era. They engage in business, family care, science, technology, and other pursuits. Although they make money, the majority of them do not yet have economic power. A married woman's income aids in providing for her family. The majority of middle-class women's salaries go toward supporting their families. But frequently, individuals lack the ability to make financial decisions in their lives. Thus, this essay aims to investigate women's economic empowerment in India. We will talk about it in this paper. Making Strategic Choices for Women's Economic Empowerment

Keywords: Strategic Decision, Economic Empowerment, Decision-Making, Economic Freedom, Women's Ability, Education, Family Responsibility, Gender Discrimination

Introduction

In addition to having autonomy over their time, bodies, and lives, women's economic empowerment includes their capacity to find decent jobs, control productive resources, and engage in markets. It also entails giving women a stronger voice and allowing them to actively participate in economic decisions at all levels, from national and international organizations to households. Gender equality is only one aspect of women's economic empowerment. In addition to improving individual well-being, complete economic equality for women promotes family welfare and economic expansion. Any development project that ignores the economic empowerment of women runs the danger of not producing the desired results. Therefore, it should be acknowledged that putting women's economic empowerment first is a crucial driver for accelerating the SDGs' achievement. [1]

The process of change that grants people more autonomy over their decisions and actions is referred to as empowerment. The availability of resources and women's ability to use them are key factors in the growth of economic empowerment for women. It also depends on women's ability to regulate their financial gains and access economic possibilities. When it comes to turning resources into strategic decisions, women actually encounter challenges at every stage. The primary barrier to women's economic empowerment is society's reliance on women carrying out unpaid work at home or in the marketplace (such as in the agricultural sector). Because of this, women experience more time poverty and are less able to participate in formal, paid employment. In order to actively advance gender equality and women's rights, social institutions must undergo structural transformation in order to remove and overcome many of the obstacles to women's economic empowerment. Women's economic empowerment faces more obstacles

during and after conflict. The low importance of gender-related development goals in the political agenda for rebuilding and the restricted ability of various actors (such as the government and civil society) to carry them out are the reasons for this. [2]

Nonetheless, during and after conflicts, there is frequently a greater understanding of the prospects for women's economic empowerment, including the opportunity to alter historical discriminatory gender norms. Furthermore, by expanding on their newly acquired economic positions throughout the conflict, women's economic empowerment may contribute to strategic development goals and new economic opportunities. One of the most significant elements promoting gender equality is the economic empowerment of women. Since the majority of economically disadvantaged groups are women, a special attention on women is required. Social conventions and gendered power structures keep both men and women in roles that restrict their productivity and their ability to make decisions that will improve their circumstances. [3]

The need to economically empower women is becoming more widely acknowledged as a means of achieving women's rights as well as more general development objectives including economic growth, poverty alleviation, health, education, and welfare. The goal of women's economic empowerment has been the focus of numerous organizations during the past five years. These organizations understand that empowering women economically benefits society as a whole as well as women. In addition to lowering household poverty, boosting economic growth and productivity, and improving efficiency, it supports women's rights and well-being.

In developing nations, gender disparities in household decision-making are a prevalent occurrence. Geographical location, culture, and ethnicity all have an impact. The majority of these variances are observed in farm families. Despite being equally involved in various household and professional activities as men, women's choices are not taken into account. Therefore, actions must be taken to empower and support women and to allow them a say in decisions pertaining to both domestic and professional activity. [4]

An essential component of empowering women is decision-making. Women might take part in planning and decision-making tasks and make individual contributions to development programs and activities at household and societal levels if they were given more authority. Understanding women's empowerment status through their ability to make decisions about domestic tasks is the study's goal.

Difficulties Women are more than just things, and they must go through a difficult time in order to be valued. They have faced numerous problems and difficulties throughout ages, and they still do in the current situation. These are briefly covered below:

- **Lack of Education:** The majority of women continue to be denied their fundamental right to an education. Their parents compel them to handle home chores.
- **Female Feticide:** Despite the progress made by our society and country, female feticide is still committed in many places, and our government is pursuing various remedial actions to curb it.
- **Family Responsibility:** Girls are confined to the four walls of their home from a very young age and are expected to take care of their family.
- **Gender Discrimination:** Men are prioritized above women in every significant decision-making.
- **Social Status:** It is difficult for women to stand out in the wider society. They are denied their rights on a social and fundamental level.

Economic Empowerment of women

1. Poverty Eradication

Macroeconomic policies and programs aimed at eradicating poverty will specifically address the needs and issues of women, who make up the majority of those living below the poverty line and are frequently in extreme poverty due to the harsh realities of social and intra-household discrimination.

2. Micro Credit

To improve women's access to credit for production and consumption, new microcredit mechanisms and microfinance institutions will be established, and existing ones will be strengthened to increase credit outreach.

3. Women and Economy

By formalizing their involvement in these procedures, women's viewpoints will be incorporated into the formulation and execution of macroeconomic and social policies. In both the formal and informal sectors, including home-based workers, their contributions to socioeconomic development as producers and workers will be acknowledged, and suitable employment and working conditions policies will be developed.

4. Globalization

Women's equality has been hampered by new obstacles brought about by globalization, the effects of which on gender have not yet been thoroughly and methodically assessed. However, it is clear from the micro-level research commissioned by the Department of Women

& Child Development that policies pertaining to employment quality and access need to be reframed.

5. Women and Agriculture

Focused efforts will be made to guarantee that the advantages of training, extension, and other programs reach women proportionate to their numbers, given their crucial role as producers in agriculture and related fields.

6. Women and Industry

The development of the food processing, textile, agro-industrial, electronics, and information technology industries has been greatly aided by the significant role that women play in these fields. To engage in different industrial sectors, they would receive all-encompassing assistance in the form of social security, labor laws, and other support services.

7. Support Services

To create an enabling environment and ensure their full cooperation in social, political, and economic life, the provision of support services for women, such as child care facilities, including crèches at workplaces and educational institutions, homes for the elderly, and homes for the disabled, will be expanded and improved. [5]

Review of Literature

Women's economic empowerment is now widely recognized by governments and corporations worldwide as being crucial to both human advancement and corporate success. It has been praised for being a powerful engine of economic expansion, a foundation for ensuring that every child has a sustainable future, and a theory for reducing poverty. Empowering women is the only way to achieve social equality in the nation. Individual homes, society, or the country will not prosper if women continue to be underdeveloped and unhappy individuals. According to research, nations see faster economic growth when women participate more completely in the economy than at any other point in history. Despite the fact that women today make up over 40% of the global workforce and hold prominent positions in businesses and organizations, they still lack equal rights to financial independence and other elements of life in many nations. (J. D. Pluess, 2016) [6]

Currently, the government is working to empower women in order to achieve the welfare of families and communities. The government's efforts to achieve this goal include a complete commitment to gender equality, the creation of equal opportunities and rights for men and women, roles and participation in education, economics, politics, socioculture, defense, and security, and equal treatment in the pursuit of development. In

order to achieve this, efforts must be made to integrate gender equality and justice policies into development. since it ignores the fact that women continue to play a very little role in the areas of education, health, social culture, politics, law, and the economy. Women's quality of life is negatively impacted (Prantiasih, 2014). [7]

The endeavor to empower women involves equipping them with skills and abilities that align with their interests and strengths. Gender issues are frequently linked to women's difficulties. Gender is generally used to identify sociocultural distinctions and equality between men and women. The idea of gender describes the duties and obligations that men and women have as a result of the social and cultural circumstances in which they live. Hubeis (2010) defines women's empowerment as initiatives to raise women's position and contribution to nation-building, as well as the caliber of women's groups' independence and role. In order for women to develop to their full potential and be able to plan, take initiative, organize themselves, and be accountable for both themselves and their surroundings, it is believed that women must first develop critical awareness. Only until women are able to examine themselves and utilize their experiences, perceptions, and hearings to make sense of the world around them will they be able to develop this critical consciousness. Activities that increase women's demands and abilities and increase their income, such as the creation of profitable economic ventures, social advice, skill guidance, facilities, or social support, are all considered to be part of women's empowerment. [8]

Objectives

- To comprehend the demands for women empowerment.
- To offer suggestions and recommendations that enhance decision-making power and empowerment at the household level
- To investigate how decision-making power affects women's empowerment.
- To discuss the importance of women's empowerment in the economic development.

Research Methodology:

Secondary data served as the study's foundation. The National Sample Survey Office (NSSO) website was one of the many sources from which the necessary data was gathered. The pertinent data has been chosen in order to determine the workforce participation of women for the economic development periods of 2012–2013, 2013–2014, and 2015–2016. A bar diagram was utilized to analyze the data that was gathered. NGOs, reports from the Indian government, and research presented at national and international conventions.

Result and Discussion

Hypothetical Strategic Women Empowerment Model:

Some of the most difficult issues from earlier study literature for women's empowerment have been discovered by researchers after doing a thorough systematic literature review on the subject. They are:

- Economic Development
- Boost legal support and access to justice.
- Educational Development
- Minimize Gender Discrimination

This study did, however, uncover gaps in earlier studies that highlighted a small number of obstacles to women's empowerment. Researchers looked into the United Nations, World Trade Organizations, and World Economic Forums survey reports and discovered further difficulties. Numerous issues related to women's empowerment that have not received much attention in earlier studies have been examined in this study. These are preventing women and girls from achieving their full potential. The following are some more difficult points: [9]

Increased Access and Control Over Resources

- Equal Property Rights
- Increased Political Participation
- Remove Socio-Cultural Barriers
- Make sure basic requirements (nutrition, health, safety, sanitation, and housing) are met.
- Minimizing Gender Pay Gap and Discrimination

In conclusion, the study's researchers put forth a theoretical model of strategic women's empowerment that integrated all obstacles to overcome. This strategic empowerment model focuses on nearly all of the obstacles that women experience in the household and in society at large, obstacles that must be overcome in order to meet the goal of women's empowerment and to guarantee a country's sustained growth.

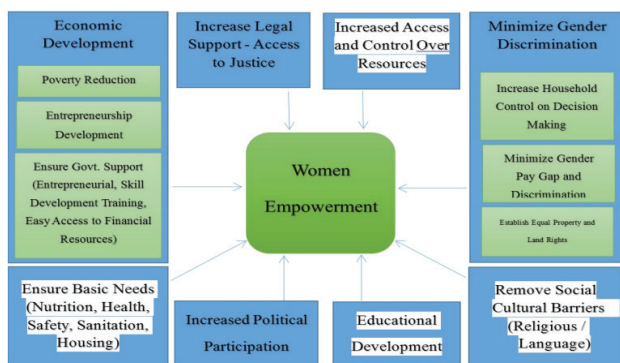


Figure 1: The Strategic Women Empowerment Model [10]

Role of Women in Economic Development

In India, women perform the roles of spouses, mothers, and producers of products and services, but their contribution to economic growth has been overlooked. Health, starvation, repeated childbearing, and education were the issues most frequently mentioned. Women must have easy access to low-interest loans, family planning services to limit childbearing, and training in income-generating occupations if their involvement in economic development is to be increased. India's rapid development hasn't always been inclusive or equitable. Deeply ingrained issues still exist, and our development process is still very much a work in progress. Women's empowerment is the nation's most pressing issue. Women's empowerment and education have often been shown to be the driving force behind rapid socioeconomic growth worldwide. In India, women comprise 7.5% of the global population. Their quality of life is getting better, as evidenced by some development indicators. The rate of change is heartbreakingly slow, with maternal mortality rates falling, literacy rates rising, and more women obtaining access to healthcare and education. [11]

Table 1: Women Employment Rates in the Different States of India

States of the India Country	Percentage of the Women Employment Rates		
	2012-2013	2013-2014	2015-2016
Mizoram	51.7	61.3	59.0
Nagaland	33.8	34.7	55.9
Chhattisgarh	44.8	51.0	54.2
Arunachal Pradesh	45.7	56.1	51.6
Meghalaya	47.6	58.9	49.9
Jharkhand	28.4	45.7	48.2
Sikkim	39.5	50.7	48.2
Andhra Pradesh	44.9	49.6	47.0
Manipur	36.9	50.8	46.4
Tripura	32.1	31.4	45.3
Telungana	0.0	52.1	42.7
Tamil Nadu	35.0	39.6	39.3
Karnataka	32.2	34.5	33.3
Maharashtra	32.8	34.6	32.8%
Rajasthan	27.4	33.9	31.9%
Puducherry	20.9	25.7	28.1%
Andaman and Nicobar	18.5	32.5	25.1%
Assam	27.0	33.9	24.5%
Odisha	25.3	28.5	23.7%
Kerala	20.3	27.8	23.7%
Goa	20.3	26.0	21.2%
Uttarakhand	20.6	26.4	20.5%
West Bengal	20.6	17.2	20.5%
Gujarat	16.4	24.5	19.9%
Haryana	15.4	16.5	18.7%
Bihar	10.4	16.7	17.8%
Madhya Pradesh	32.1	34.0	17.2%

Source: National Sample Survey Office (NSSO), Women Workers Population ratio in 2012-13, 2013-2014, 2015-2016.

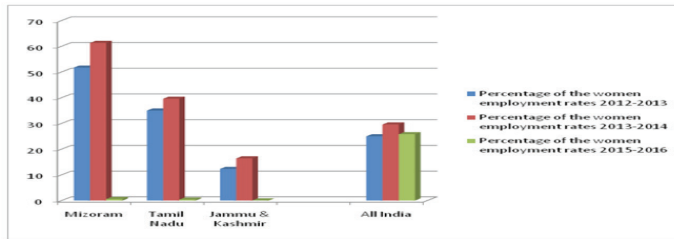


Figure 2: Women participation in the workforce in different states of India

It is evident from the above table and figure that women's employment rates in various Indian states throughout the years 2012–2013, 2013–2014, and 2015–2016. In terms of economic growth, Mizoram has the highest ratio of women in the workforce (51.7 percent in 2012–2013, 61.3 percent in 2013–2014, and 59.0 percent in 2015–2016). While Jammu and Kashmir has the lowest ranking for women's empowerment, at just 7.9 percent of the state's total population, it differs in 2012–2013 (12.3%) and 2013–2014 (16.4%). Thus, it is clear that women's employment involvement declined significantly after 2014 as a result of national and state political concerns. Just 39.3 percent of Tamil Nadu's female population was employed in 2015–2016, compared to 35.0 percent in 2012–2013 and 39.6 percent in 2013–2014. All things considered, the proportion of women in the workforce increased by relatively little in 2015–2016 when compared to prior years. [12]

Lastly, this ratio is small and indicates that over 60% of women in the state and 75% of women nationwide are involved in nonproductive activities. This means that women are employed in domestic work, which is not considered an income-generating activity for the nation's economic development.

Women's social, economic, political, and legal empowerment is going to be an incredible undertaking. Changing the culture to promote respect for women is not an easy task. Reforms take time, but only a revolution can bring about changes in a day. Women are in a special place in the economy. Women will become more visible and vocal if they become economically stronger. Women's empowerment can be greatly aided by their direct involvement in decision-making and revenue-generating activities. Women can become more economically active through entrepreneurship and working as the family's primary provider, which could raise their social standing.

The state of women's empowerment The state of women's empowerment cannot be represented in a single dimension; instead, a multifaceted evaluation that takes into account several aspects of women's lives and

position would provide a clear picture. Thus, this essay attempts to provide a general overview of women's status and circumstances in relation to work, education, health, and social standing. [13]

Conclusion

Giving women the authority or power to carry out tasks at the home and professional levels is known as women's empowerment. Women's decision-making is crucial because it strengthens their negotiating position and fosters economic empowerment. Women who are empowered will be able to independently contribute to development programs and activities as well as take part in planning and decision-making duties. Greater education, financial resources, and income-earning ability boost women's confidence and self-esteem, and they are more likely to take part in both public and private decision-making. Stereotypes that attribute men's power to the public and women's to the private sphere are frequently the cause of low engagement. Although it is a crucial first step, using quotas and constructive action to enhance women's participation in decision-making bodies is insufficient to guarantee their involvement. Economic empowerment is a prerequisite for women's empowerment. When women are economically empowered, the possibilities are endless. Everyone will benefit from their vast potential, expertise, talent, sincerity, and commitment. The government should take the appropriate steps to safeguard, assist, and direct its citizens.

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Fostering Entrepreneurship and Skill Development for Sustainable Socioeconomic Growth: Analyzing the Present Landscape and Future Prospects for Telangana State

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Abstract

Entrepreneurship and skill development are crucial drivers of socioeconomic growth, especially in rapidly developing regions like Telangana. This paper examines the state's progress in fostering a conducive environment for business innovation, technological advancements, and skill-building initiatives. It explores government programs, industry partnerships, and emerging sectors, focusing on factors such as infrastructure, policy support, educational reforms, and technology. The study highlights achievements and challenges in driving growth, while proposing a future agenda that includes adaptive skill programs, inclusive entrepreneurship ecosystems, and digital platforms. It emphasizes aligning skill development with industry needs, particularly in AI, green technologies, and sustainable industries, to build a diversified economy.

Introduction

Entrepreneurship and skills development are integral to the socioeconomic advancement of any region, particularly in rapidly evolving economies. In the case of Telangana, a state that has emerged as one of India's foremost hubs for technological innovation and industrial growth, these factors are pivotal in shaping its future. Telangana's commitment to fostering an ecosystem that promotes entrepreneurial spirit and enhances workforce capabilities has positioned it as a model for other states in the country. With its strong focus on creating an enabling environment for startups, digital transformation, and sectoral diversification, Telangana is leveraging its unique strengths in technology, infrastructure, and governance to build a thriving, knowledge-based economy.

This paper delves into the current landscape of entrepreneurship and skills development in Telangana, exploring the government's initiatives, industry collaborations, and the role of emerging sectors in driving growth. It assesses the state's infrastructure, policy frameworks, and educational reforms, which are central to cultivating an innovative workforce. Additionally, the paper examines the opportunities and challenges in aligning skill development with the needs of a rapidly

changing job market, particularly in fields such as artificial intelligence, renewable energy, and sustainable industries. As Telangana continues to evolve as a hub of innovation, this study offers insights into the strategies that can ensure long-term socioeconomic prosperity, while identifying critical areas for improvement in policy and implementation.

Aim: This study aims to explore the role of entrepreneurship and skills development in driving Telangana's socioeconomic growth. It evaluates the effectiveness of government initiatives, industry collaborations, and skill-building programs. The study also identifies emerging sectors that can shape the state's economic future.

Objectives:

1. To assess the current state of entrepreneurship in Telangana, focusing on policies, infrastructure, and support mechanisms.
2. To examine the role of skill development programs in meeting the demands of emerging industries.
3. To evaluate industry collaborations in shaping the entrepreneurial ecosystem and providing youth skill development.

- To explore challenges in entrepreneurship and skills development and propose solutions for overcoming them.

Hypothesis:

- Entrepreneurship and skills development significantly contribute to Telangana's socioeconomic growth, fostering job creation and innovation.
- Government initiatives and industry partnerships are key in creating a dynamic entrepreneurial ecosystem.

Review literature

The nexus between entrepreneurship, skills development, and socioeconomic growth is crucial, particularly in regions like Telangana. Research highlights entrepreneurship's role in driving job creation, innovation, and industrial diversification. Telangana's initiatives, such as *TS-iPASS*, aim to streamline processes for startups, though challenges like limited access to finance and infrastructure persist (Bansal, 2017; Kapur & Shankar, 2019). Skill development is essential for workforce empowerment, with programs like *Skill Telangana* bridging gaps in sectors like IT and biotechnology. However, gaps remain in areas like AI and renewable energy (Desai & Mehta, 2017; Rao & Gupta, 2020).

Industry collaborations, notably through hubs like *T-Hub*, foster innovation and skill alignment, but inclusivity issues remain, particularly for marginalized communities (Sharma & Singh, 2021; Nair & Kumar, 2019). Technology and digital platforms have also enhanced entrepreneurship and skill development, though challenges in digital literacy remain (Kumar & Sethi, 2021). Emerging sectors like AI and green energy hold promise for Telangana's future, but aligning skills with these sectors is vital for sustaining growth (Rajesh & Murthy, 2021; Sharma, 2023).

The Population of Telangana: A Strategic Resource or a Liability?

Telangana, an emerging economic hub in southern India, is home to a young, dynamic, and increasingly skilled population. Whether this population serves as a strategic resource or a liability is critical for evaluating the state's potential for socioeconomic growth. The key lies in harnessing human capital through effective entrepreneurship and skills development, ensuring it contributes to long-term prosperity.

Current Demographics and Human Capital in Telangana

With a population of over 39 million, Telangana's median age is around 28, offering significant potential for labor force growth. The youthfulness of the population presents opportunities in sectors like IT, pharmaceuticals, and manufacturing. However, the challenge lies in equipping this young workforce with the skills needed to match global economic demands, with a persistent gap between education outcomes and industry requirements.

Entrepreneurship: A Key Driver for Economic Growth

Entrepreneurship plays a vital role in economic development, particularly in a growing population. Telangana has created a supportive environment for startups, with policies like the Telangana Industrial Policy and T-Hub, fostering innovation in Hyderabad. However, sustaining this entrepreneurial wave requires continuous innovation, venture capital access, and the development of both technical and soft skills among young entrepreneurs.

Skills Development: Bridging the Gap

The key to turning Telangana's population into a strategic asset lies in effective skills development. Programs like the Telangana State Skill Development Corporation (TSSDC) aim to bridge the gap between educational outcomes and industry needs, particularly in IT, healthcare, and manufacturing. Despite efforts, the challenge remains in aligning educational curricula with rapidly evolving technological landscapes, necessitating greater collaboration between academia, industry, and government.

Population: A Strategic Resource or a Liability?

Telangana's young population can be a powerful asset if supported by the right policies. In a knowledge-driven economy, the workforce is critical for growth in innovation-intensive sectors. However, without the necessary skills, the population could become a liability, resulting in underemployment, poverty, and social unrest. Sustainable growth requires investing in infrastructure, healthcare, and education to fully realize the potential of its youthful demographic.

Future Prospects for Telangana

Looking ahead, Telangana's future lies in leveraging its human capital for socioeconomic growth. With expanding sectors like IT, biotechnology, and pharmaceuticals, the demand for skilled labor will rise. To ensure the population becomes a strategic resource, the state must address the skills gap by aligning education with industry needs and continuing to build

a robust ecosystem for entrepreneurship. By investing in human capital, Telangana can position itself as a leader in the knowledge economy, driving growth, innovation, and prosperity.

Youth Labor Market and Employment Profile in Telangana (2022-2023)

Based on the topic "**Entrepreneurship and Skills Development for Socioeconomic Growth: Current Landscape and Future Prospects for Telangana State (2022-2023)**", here's a summarized and approximate table with key points related to the youth labor market, employment, and skills development in Telangana for 2022-2023:

Category	2022 (Estimate)	2023 (Estimate)
Youth Labor Force Participation (Ages 15-24)	~ 58-60%	~ 60-62%
Youth Unemployment Rate	~ 8-10%	~ 7-9%
Entrepreneurship and Startups (Youth-Driven)	~ 5-7% of the workforce	~ 6-8% of the workforce
Youth Employment by Sector		
- Agriculture & Rural Development	~ 25-30%	~ 24-28%
- Services (IT, Retail, Hospitality)	~ 35-38%	~ 36-39%
- Manufacturing & MSMEs	~ 15-18%	~ 14-16%
- Healthcare & Education	~ 8-10%	~ 9-11%
Youth in IT & Technology Startups	~ 10-12%	~ 12-14%
Youth Participation in Skill Development	~ 12-14%	~ 13-15%
Women Entrepreneurs	~ 10-12%	~ 12-14%
Key Skill Development Areas		
- Digital and Tech Skills (Coding, Web Development)	~ 6-8%	~ 7-9%
- Vocational and Technical Skills	~ 8-10%	~ 9-11%
- Soft Skills (Leadership, Communication)	~ 4-5%	~ 5-6%
New Startups Established by Youth	~ 10,000-12,000 (approx.)	~ 12,000-14,000 (approx.)
Youth in MSME Sector	~ 15-20%	~ 16-22%

Key Insights for Telangana (2022-2023):

- **Youth Labor Force Participation:** Participation is expected to improve, aided by skill development programs and increased focus on entrepreneurship.
- **Entrepreneurship:** There is a strong push for youth-led startups, especially in IT, tech, and agribusiness sectors.

- **Skill Development:** Telangana is investing in digital, technical, and soft skills to improve employability. Government schemes and private-sector initiatives have been central in equipping the youth workforce.
- **Sectoral Employment:**
 - The service sector, particularly IT and retail, is the largest employer.
 - Agriculture and manufacturing are still significant but are seeing slower growth compared to services and technology.
- **Women in Entrepreneurship:** Increased focus on encouraging women to take part in entrepreneurship, with rising numbers each year.

Conditions of the Business Landscape and Institutional and Stakeholder Support for Entrepreneurship and Skills Development in Telangana:

Here is a condensed version highlighting the main points of the **entrepreneurship and skills development** landscape in Telangana for **socioeconomic growth**:

1. Business Landscape in Telangana

- **Shift to a Knowledge-Driven Economy:** Telangana, particularly Hyderabad, has emerged as a global hub for **technology, biotech, and pharmaceuticals**.
- **Government Policies:** Policies like the **Telangana Industrial Policy** and **Innovation Policy** promote business growth. The **Single Window Clearance System** facilitates easier business setup.
- **Technological Advancements:** Hyderabad's rise in **IT, AI, and fintech** sectors is supported by infrastructure like **T-Hub**, fostering innovation and collaboration.
- **Funding Access:** Increased access to **venture capital, angel investors**, and government grants, especially through the **Telangana State Innovation Cell (TSIC)**.
- **Sectoral Diversification:** Emphasis on **agriculture, manufacturing, and services**, in addition to tech, has spurred entrepreneurship in various industries.

2. Institutional and Stakeholder Support:

- **Government Support:**
 - **TSIC** aids innovation and startups.
 - **TSSDC** focuses on workforce skill development through training and certification.

- **IDACT** supports industrial growth with infrastructure and investment opportunities.
- **Educational Institutions:** Leading universities and technical institutes provide cutting-edge education for entrepreneurship.
- **Private Sector:** **HYSEA, TITA, and angel investors** such as **Hyderabad Angels** support startups through networking, funding, and mentoring.
- **International Partnerships:** Collaborations with **World Bank, UNDP, and ADB** provide global expertise and funding for skill development and entrepreneurship.
- **Community Initiatives:** **NGOs** focus on inclusive entrepreneurship, especially for women and rural youth.

3. Challenges and Future Prospects:

- **Skill Gaps:** Despite growing skill initiatives, there is a mismatch between education and industry needs, particularly in **AI, robotics, and renewable energy**.
- **Access to Finance for MSMEs:** Many **small and medium enterprises (MSMEs)** still struggle with access to capital, affecting sustainable growth.
- **Rural Connectivity:** Rural areas face challenges in **digital infrastructure** and access to markets, which need to be addressed for inclusive growth.

These points encapsulate the current landscape and future prospects for entrepreneurship and skills development in Telangana.

Regional and other state comparison

When comparing Telangana's entrepreneurship and skills development landscape with other states, Telangana stands out for its robust technological infrastructure, especially in which has positioned itself as a global hub for IT, biotechnology, and pharmaceuticals. In contrast to states like **Karnataka** and **Maharashtra**, which also excel in IT, Telangana has made significant strides in diversifying its economy into **agriculture, manufacturing, and services**. The state's pro-business policies, such as the **Single Window Clearance System** and initiatives like **T-Hub**, foster innovation and attract investments. However, while **Karnataka** and **Tamil Nadu** benefit from established startup ecosystems and extensive access to venture capital, Telangana is increasingly closing the gap with **strategic government programs** such as the **Telangana State Innovation Cell (TSIC)**. Despite these advancements, challenges persist in addressing **skill mismatches, financing for MSMEs, and infrastructure deficits in rural areas**, areas where states like **Gujarat** and **Madhya Pradesh** have made

notable progress.

Percentage of firms offering formal training

Typically include key insights such as:

1. **Entrepreneurship in Telangana:** Analyzing the landscape of entrepreneurship in the state, identifying growth sectors, and understanding barriers to entrepreneurship.
2. **Skills Development Programs:** Examining government and private sector efforts to provide formal training, vocational education, and skill development to foster a skilled workforce.
3. **Percentage of Firms Offering Formal Training:** This section likely highlights data on how many firms or businesses in Telangana offer structured training programs for employees, with a focus on skill enhancement to improve productivity.
4. **Socioeconomic Growth:** Discussion on how entrepreneurship and skills development contribute to the state's overall economic growth, employment opportunities, and poverty reduction.

Government Initiatives for Skills Development

Some key programs that are typically part of such efforts:

1. **Telangana State Skill Development Corporation (TSSDC):** This organization aims to provide skill training to youth, enhancing employability and entrepreneurship.
2. **Skill Development Centers:** Various centers across the state provide training in fields like IT, manufacturing, hospitality, and more. These are often supported by government funding.
3. **Pradhan Mantri Kaushal Vikas Yojana (PMKVY):** A national initiative that is implemented in Telangana to offer financial support for skill training to youth.
4. **Entrepreneurship Development Programs:** These focus on nurturing small businesses and startups, offering training in business management, financial literacy, and innovation.
5. **Tribal Welfare Skill Programs:** Specific initiatives aimed at empowering tribal communities with specialized skills to ensure their economic inclusion.

Implications and Recommendations

Keeping in view the discussion made on socioeconomic growth, Government of telagana need to take drastic measures to enhance the skills level of nation with special emphasizes on being self-employed. Based on above mentioned facts and global trends, following are some of the recommendations for Government and policy making institutions;

1. **National Policy for Skills Development and Entrepreneurship** Telangana focuses on innovation and sector-specific policies. Telangana should incorporate feedback from industry, academia, and government to create effective skill development programs.
2. **Integrated National-Level Plans** Telangana breaks down skill development through sectoral programs. Telangana can adopt a similar approach, focusing on IT, healthcare, agriculture, and manufacturing.
3. **Revamping Governance** Telangana has streamlined governance for faster implementation. Telangana needs better collaboration among stakeholders to enhance entrepreneurship and skill development.
4. **Eradication of Corruption** Telangana uses digital systems to reduce corruption. Telangana should ensure transparency in business licensing, financial disbursement, and public services.
5. **Support for Entrepreneurial Ventures** Telangana supports startups with incubators, accelerators, and financial schemes. Telangana should replicate these initiatives to provide mentorship and funding.
6. **Focus on Job Creators** Telangana aligns curricula with industry needs, emphasizing entrepreneurship. Universities in Telangana should focus more on fostering entrepreneurship through business planning and financial literacy.
7. **Liaison Between Universities and Industry** Telangana has strong university-industry linkages. Telangana should strengthen collaboration to ensure curricula align with employers' needs.
8. **SMEDA and Proactive Policy Making** Telangana supports MSMEs through initiatives like TS-iPASS. Telangana's **Small and Medium Enterprises Development Authority** (SMEDA) should reduce bureaucracy and offer more incentives for SMEs.
9. **Benchmarking Institutions for Skill Development** Telangana Academy for Skill and Knowledge (TASK) connects youth with employers. Telangana can improve its Technical Education and Vocational Training Authority (TEVTA) and telagana Information Technology Board (TITB) by adopting successful models like Telangana's..
10. **Increasing Funds for Skill Development Councils** Telangana prioritizes funding for skill programs. Telangana should allocate more resources to Skill Development Councils to expand training initiatives.
11. **Policies to Support Small and Medium Businesses** Telangana offers incentives and easy finance access to MSMEs. Telangana should provide similar support through tax relief and capacity building.
12. **Promoting Co-Existence of MNCs and SMEs** Telangana fosters fair competition between MNCs

and SMEs. Telangana should adopt policies that support both for innovation and competition.

13. **Access to Finance for New Ventures** Telangana offers funding through the Telangana Startup Policy. Telangana should create more funding channels, including government-backed loans.
14. **Increasing the Tax-Paying Population** Telangana improves tax compliance with digital platforms. Telangana can use similar strategies to boost tax compliance and support small businesses.

Conclusion

Entrepreneurship and skills development are crucial for socioeconomic growth in Telangana, where the government has made significant strides through innovation-driven policies, sector-specific initiatives, and university-industry collaborations. Despite progress, challenges such as governance improvements, corruption eradication, and better access to finance for SMEs remain. Programs like the Telangana Academy for Skill and Knowledge (TASK) and the Telangana State Innovation Cell (TSIC) showcase the state's commitment to building a skilled workforce and fostering entrepreneurship. Moving forward, aligning educational curricula with industry needs and strengthening frameworks will further enhance Telangana's competitiveness, supporting both large MNCs and SMEs, creating jobs, and boosting the state's economy.

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Financial Literacy of Women in Telangana State: A Study

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Abstract

Financial literacy enables individuals to budget, save, invest, and strategize for the future. Education, profession, socioeconomic level, and cultural norms influence women's financial literacy in Telangana State. This study investigates the financial literacy of women in Telangana to identify key determinants, challenges, and barriers to financial management.

Mixed-method research gathers data from urban and rural women through surveys, interviews, and focus group discussions. It examines the impact of education, economic autonomy, and financial services on their financial comprehension and behavior. The paper evaluates the effectiveness of the Pradhan Mantri Jan Dhan Yojana in enhancing financial inclusion for women.

Preliminary results suggest that urban women possess superior financial literacy compared to their rural counterparts, attributable to enhanced educational and professional opportunities. Cultural barriers, lack of knowledge on financial products, and insufficient digital literacy hinder women's financial autonomy. The research underscores the necessity for targeted financial education, accessible financial services, and community-oriented initiatives to empower women and enhance financial well-being.

This research underscores the significance of financial literacy in the socio-economic advancement of women and advocates for collaboration across governmental, financial, and non-governmental organizations to bridge the financial literacy gap.

Keywords: Budget, Financial Comprehension, Community-oriented Initiatives, Financial Education

Introduction

Financial literacy is the ability to understand and manage various aspects of personal finance, including budgeting, saving, investing, and planning for retirement. In India, as in many other countries, the financial literacy rate among women has historically been lower than men, due to socio-cultural and economic factors. The state of Telangana, in southern India, provides a unique context for studying the financial literacy of women, as it has experienced rapid urbanization, industrialization, and a growing emphasis on women's empowerment in recent years.

This study aims to analyze the level of financial literacy among women in Telangana, understand the factors influencing their financial decision-making, and identify the challenges they face in managing their finances.

Objectives of the Study

1. To assess the general financial literacy levels of women in Telangana.

2. To identify factors influencing financial decision-making and management.
3. To examine the impact of education, employment, and socio-economic status on financial literacy.
4. To evaluate the role of government initiatives and programs in promoting financial literacy among women.
5. To explore barriers and challenges women face in improving their financial literacy and managing finances effectively.

Literature Review

Existing literature reveals that financial literacy among women is shaped by several factors such as education, socio-economic background, access to financial services, and cultural norms. Studies in India and other countries show that women tend to have lower financial literacy compared to men, particularly in rural areas. However, the importance of financial literacy is gaining

recognition, and various initiatives have been introduced by governments and non-governmental organizations to address this gap.

Key Findings from the Literature:

1. **Educational Attainment:** Higher levels of education are positively correlated with higher financial literacy. Educated women tend to make more informed financial decisions.
2. **Employment and Economic Independence:** Women with formal employment or a source of income tend to have higher financial literacy, as they are more likely to manage their own finances and invest.
3. **Cultural Norms and Family Dynamics:** In many traditional societies, including rural Telangana, women often lack control over household finances. This reduces their ability to make financial decisions.
4. **Government Initiatives:** Programs like *Pradhan Mantri Jan Dhan Yojana (PMJDY)* and *Financial Literacy Week* have been promoted by the government to improve financial awareness.

Methodology

The study employs both **quantitative** and **qualitative research methods** to gather data.

1. **Survey:** A structured questionnaire will be distributed to a random sample of women across urban and rural areas of Telangana. The survey will cover:
 - Basic financial knowledge (savings, credit, insurance, investment options).
 - Understanding of financial planning (budgeting, retirement planning).
 - Financial decision-making within households.
 - Awareness of government financial schemes for women.
2. **Interviews:** In-depth interviews with a few key stakeholders, including financial advisors, government officials, and community leaders, will help in understanding the broader socio-cultural factors affecting women's financial literacy.
3. **Focus Groups:** Focus group discussions will be conducted with women from different socio-economic backgrounds to gain insights into the challenges they face in managing finances and how they perceive financial products.
4. **Secondary Data:** Reports from government agencies, financial institutions, and non-governmental organizations (NGOs) will be analyzed to understand the broader trends in financial literacy among women in Telangana.

Analysis

The data gathered will be analyzed to identify:

1. **Financial Knowledge:** Understanding of basic financial concepts like interest rates, inflation, saving, and investment.
2. **Financial Behavior:** Practical application of financial knowledge, including savings, use of credit, and investment habits.
3. **Barriers to Financial Literacy:** Social, economic, and psychological barriers that prevent women from being financially literate.
4. **Role of Government Schemes:** How well women are aware of and utilizing financial empowerment programs like *Mudra Yojana*, *Self-Help Groups*, and others.

Findings

Based on preliminary studies and literature, it is expected that:

1. **Urban vs Rural Divide:** Urban women are likely to have higher financial literacy levels compared to rural women due to greater access to education, employment, and financial services.
2. **Education's Role:** Financial literacy will be positively correlated with higher educational levels. Women with at least a graduate degree are expected to have a better understanding of financial matters.
3. **Income and Employment:** Employed women or women with their own income sources will demonstrate better financial management skills, including saving and investing.
4. **Barriers to Financial Literacy:** Lack of time, limited access to financial resources, and lack of exposure to financial education will emerge as major barriers.
5. **Government Schemes:** Awareness of government schemes among women in rural areas will likely be low, despite efforts to promote financial inclusion.

Challenges Faced by Women in Financial Literacy

1. **Lack of Access to Financial Education:** Many women, especially in rural areas, have limited access to formal financial education programs.
2. **Cultural Barriers:** Societal norms may prevent women from participating in financial decision-making, either within families or in businesses.
3. **Financial Dependence:** In many households, women are financially dependent on their spouses, reducing their financial autonomy.

4. **Limited Awareness of Financial Products:** Many women are unaware of financial products such as insurance, mutual funds, or government schemes designed to empower them.
5. **Low Digital Literacy:** With increasing reliance on digital banking and mobile financial services, many women, particularly in rural areas, face challenges in navigating these platforms.

Recommendations

1. **Educational Programs:** Government and NGOs should focus on creating financial literacy programs targeted at women, particularly in rural areas.
2. **Inclusion in Decision-Making:** Women should be actively included in financial decision-making within households. Awareness campaigns can promote the importance of shared financial responsibility.
3. **Access to Financial Services:** Financial institutions should simplify their products and offer them in local languages to make them accessible to women from diverse backgrounds.
4. **Government Schemes:** There needs to be greater outreach to ensure that women are aware of and can benefit from financial empowerment schemes.
5. **Community-Based Interventions:** Self-help groups (SHGs) and local community centers can play a significant role in educating women about finance in a more culturally sensitive and accessible manner.

Conclusion

Improving the financial literacy of women in Telangana can significantly impact their socio-economic well-being. It can empower them to make better financial decisions, enhance their economic independence, and contribute to the overall development of their families and communities. Government, financial institutions, and NGOs must collaborate to provide targeted education, resources, and support to bridge the gender gap in financial literacy and ensure that women have the knowledge and tools needed to secure their financial future.

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The Future of Insurance: A Digital Transformation

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Abstract

The insurance industry is undergoing a profound digital transformation, driven by technological advancements and evolving customer expectations. This paper explores the key trends shaping the future of insurance, including the increasing adoption of artificial intelligence, blockchain, and the Internet of Things (IoT). These technologies are revolutionizing underwriting, claims processing, and customer experience. However, the digital transformation also presents challenges such as cybersecurity threats, data privacy concerns, and regulatory hurdles. Insurers must navigate this complex landscape by embracing innovation, fostering a data-driven culture, and prioritizing customer-centricity. By leveraging digital technologies effectively, insurers can enhance operational efficiency, mitigate risks, and create innovative products and services that cater to the needs of the modern consumer.

Keywords: Insurance, Digital Transformation, Current Trends, Cyber Security.

Introduction

The insurance industry is undergoing a profound transformation driven by digital technologies, automation, and data analytics. Traditional insurance models are being reshaped by innovations such as artificial intelligence (AI), blockchain, the Internet of Things (IoT), and big data. These technological advancements are not only streamlining operations but also enhancing customer experiences, improving risk assessment, and creating new business opportunities.

The shift towards digital insurance is fueled by changing consumer expectations, regulatory developments, and the increasing need for personalization in insurance offerings. Insurtech startups, along with established insurance companies, are leveraging digital platforms to offer more efficient, transparent, and customized solutions. From AI-powered chatbots handling claims to blockchain ensuring secure transactions, digital transformation is redefining the future of the insurance sector.

This paper explores the key trends shaping the future of insurance, the challenges associated with digital transformation, and the potential impact on policyholders, insurers, and regulatory frameworks. By examining

real-world applications and emerging technologies, this study aims to provide insights into how digitalization is revolutionizing the insurance industry and what lies ahead for insurers in an increasingly technology-driven world.

History of Insurance

Insurance has a long and fascinating history, dating back thousands of years. The concept of risk-sharing and financial protection emerged as civilizations developed trade, commerce, and economic activities.

Ancient Origins

The earliest form of insurance can be traced to around **3000 BCE in Babylon**, where traders used a system called "**bottomry**". Under this system, merchants would take loans to fund their shipments, and if the cargo was lost at sea, the loan did not have to be repaid. Similar practices were observed in **ancient China** around 2000 BCE, where traders divided their goods across multiple ships to minimize losses.

Medieval Period

By the **14th century**, modern insurance principles started taking shape in **Italy**. The first known insurance contract

was signed in **Genoa in 1347**, covering maritime trade. Around the same time, **Lloyd's of London**, one of the world's oldest and most famous insurance markets, emerged as a center for marine insurance.

The Growth of Modern Insurance

During the **17th and 18th centuries**, insurance expanded beyond trade. In **1666**, the Great Fire of London led to the establishment of **fire insurance** by Nicholas Barbon. In the **18th century**, life insurance gained popularity, with companies like the **Amicable Society for Perpetual Assurance** founded in 1706 in England.

Industrial Revolution & Beyond

The **19th and 20th centuries** saw rapid growth in different types of insurance, including **health, automobile, and property insurance**, due to industrialization and urbanization. Governments also started regulating the industry, ensuring customer protection and financial stability.

Modern Insurance

Today, insurance has transformed with **digital technologies**, including **AI, blockchain, and data analytics**, making policies more accessible and personalized. The industry continues to evolve to address new risks, such as **cybersecurity threats and climate change**.

Objectives

- Analyze the impact of digital transformation on the insurance sector.
- Investigate the potential of InsurTech startups in industry disruption.
- Examine cybersecurity risks and data privacy concerns in digital insurance.

The insurance industry is undergoing a significant digital transformation, driven by evolving customer expectations and rapid technological advancements. Here's a breakdown of current trends, incorporating statistical insights:

Current Trends in Insurance

- **Digital Transformation and Customer Experience:**
Customers increasingly expect seamless digital experiences, similar to those in other sectors. This is driving insurers to invest in online portals, mobile apps, and chatbots. For instance, the adoption of mobile insurance apps has seen a steady rise, with a significant portion of consumers preferring to manage their policies digitally. This trend is amplified by the increase of smart phone usage globally. Insurers are

leveraging data analytics to personalize customer interactions and offer tailored products.

The focus is on creating a customer-centric ecosystem, where insurance is integrated into their daily lives. This means that insurers are moving away from being just providers of policies, and are becoming partners in risk management.

- **Data Analytics and Artificial Intelligence (AI):**

Insurers are harnessing the power of big data and AI to enhance risk assessment, underwriting, and claims processing. AI-powered algorithms can analyze vast amounts of data to identify patterns and predict future risks. This allows for more accurate pricing and personalized coverage.

For example, AI is being used to detect fraudulent claims, reducing losses for insurers. Additionally, AI-powered chatbots are providing 24/7 customer support, improving efficiency and customer satisfaction.

The use of AI is also increasing in the use of predictive analysis, to help with the prediction of future catastrophic events, allowing insurance companies to better prepare for them.

- **Telematics and Usage-Based Insurance:**

Telematics devices, such as those used in vehicles, are providing insurers with real-time data on customer behavior. This is enabling the growth of usage-based insurance (UBI), where premiums are based on actual usage and risk.

UBI is particularly popular in the auto insurance industry, where drivers can receive discounts for safe driving habits. This trend is expected to continue, as more consumers become comfortable with sharing data in exchange for personalized pricing.

- **Cyber Insurance:**

With the increasing frequency and sophistication of cyber attacks, cyber insurance is becoming a crucial component of risk management. Insurers are developing specialized policies to protect businesses from the financial impact of data breaches and other cyber incidents.

As businesses become more reliant on digital technology, the demand for cyber insurance is expected to grow significantly.

- **Regulatory Technology (RegTech) and Compliance:**

Insurers are using RegTech solutions to streamline compliance processes and manage regulatory requirements. Automation tools are helping insurers to stay up-to-date with evolving regulations and

data protection laws.

With the increasing amount of data being processed by insurance companies, RegTech is becoming a vital part of the industry.

Digital Transformation in Insurance

The insurance sector is experiencing a profound shift, transitioning from traditional, document-intensive practices to a dynamic, data-centric model. This evolution is fueled by the imperative to elevate customer interactions, optimize operational workflows, and respond to the changing dynamics of the marketplace. Central to this transformation is the integration of cutting-edge technologies like artificial intelligence (AI), machine learning, and cloud-based systems.

A primary area of impact is customer engagement. Insurers are now leveraging digital platforms, mobile applications, and conversational AI to deliver fluid and personalized services. This empowers customers to effortlessly manage their policies, submit claims, and access relevant information at their convenience. Moreover, advanced data analytics is instrumental in refining risk assessment and underwriting processes, enabling insurers to provide more precise and tailored policy offerings.

Process automation, encompassing claims handling and policy management, is a pivotal element of digital transformation. This not only boosts productivity and reduces operational expenses but also minimizes the potential for human error. Additionally, the proliferation of telematics and usage-based insurance provides insurers with real-time data, facilitating more accurate risk evaluation and individualized pricing strategies.

Nevertheless, this digital transition introduces complexities, notably the need to address cyber security vulnerabilities and maintain regulatory adherence. Insurers must prioritize investments in robust security infrastructure to safeguard sensitive customer information and adapt to the evolving regulatory landscape. Ultimately, digital transformation is empowering insurers to become more adaptable, customer-focused, and efficient, fostering innovation and driving industry growth.

Future of Insurance

Insurance's evolution is tied to digital adoption. Algorithms will tailor coverage and streamline claims, while connected devices will offer live risk assessments. 1. Enhanced digital interactions and preventative risk strategies will prioritize customer satisfaction. Growing cyber threats will drive the expansion of related insurance products. 2. Data-driven insights will enable insurers

to anticipate and lessen risks, moving from response to prevention. 3. The sector will become more flexible, reliant on data, and centered on customer needs.

Challenges and Opportunities

The shift to digital insurance creates a dual environment of obstacles and potential gains. A major hurdle is the prevalence of older, inflexible systems that impede the adoption of modern technologies, causing operational inefficiencies and higher expenses. Moreover, the increased digitization of data and platforms heightens the risk of cyberattacks, necessitating robust security measures to protect sensitive client information. Meeting the evolving demands of customers, who seek customized, immediate services, is another key challenge, requiring insurers to rethink their traditional offerings and engagement methods. Addressing the talent shortage in digital skills is also essential, demanding investments in employee training and recruitment.

Conversely, significant opportunities arise from this digital transition. Insurers can improve customer satisfaction through simplified processes, tailored products, and proactive risk management. AI and machine learning enable automated claims processing, refined risk evaluation, and fraud detection, leading to cost reductions and greater efficiency. Real-time data from telematics and IoT devices allows for usage-based insurance and personalized pricing models. Furthermore, digital platforms expand distribution reach and facilitate the creation of innovative products, such as on-demand and cyber insurance. Leveraging data analytics provides valuable insights into customer trends and market dynamics, supporting informed decision-making and competitive advantage. Ultimately, the ability to effectively manage these challenges and capitalize on the opportunities presented by digital insurance will determine the long-term success of insurers in a dynamic market.

Conclusion

In conclusion, the digital transformation of insurance is not merely an option, but an imperative for survival and growth. The industry is being reshaped by technological advancements and evolving customer expectations, demanding a fundamental shift from traditional practices to a data-driven, customer-centric approach. Embracing AI, machine learning, telematics, and cloud computing allows insurers to enhance operational efficiency, personalize customer experiences, and proactively manage risks. While challenges like legacy systems, cybersecurity, and skill gaps exist, the opportunities for innovation, enhanced customer engagement, and market expansion are substantial. Ultimately, insurers

that successfully navigate this digital landscape will be positioned to thrive in the future, offering agile, responsive, and relevant solutions in an increasingly competitive environment.

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DEI Policies are Transforming Workplace Culture in 2024

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Abstract

The pandemic marked a turning point for organizations, prompting a shift from merely benchmarking employee perks to adopting an inward-focused approach. This involves deeply examining the connection between employee behaviours and preferences. Progressive companies should prioritize listening to their employees, understanding their needs and aspirations, identifying different employee segments, and offering purposeful, relevant benefits that truly resonate.

In today's fast-evolving work environment, Indian companies are recognizing that employee well-being is integral to corporate success. Among their key social well-being initiatives, Diversity, Equity, and Inclusion (DEI) efforts stand out as a top priority.

In 2024, diversity, equity, and inclusion (DEI) policies are redefining workplace culture across industries. This article explores how organizations are embedding DEI into their core strategies to address inequities, foster innovation, and meet evolving employee expectations. Key trends such as regulatory changes, employee advocacy, and AI-powered tools are driving this transformation. The article highlights the impact of DEI on leadership, flexible work arrangements, intersectional inclusion, and decision-making processes. While challenges like resistance to change and funding limitations persist, the benefits of DEI including enhanced creativity, employee engagement, and business performance to make critical priority. This article underscores the importance of DEI as a strategic imperative for creating inclusive, equitable, and thriving workplaces.

In 2024, diversity, equity, and inclusion (DEI) policies have become more than just buzzwords. They are reshaping workplace culture across industries. As organizations grapple with evolving employee expectations, societal shifts, and the demand for greater accountability, DEI initiatives are proving to be essential for fostering innovation, employee satisfaction, and sustainable growth.

Keywords: Diversity, Equity, Inclusion, Workplace Culture.

Introduction

In 2024, Diversity, Equity, and Inclusion (DEI) have moved from being aspirational goals to core pillars of organizational success. As workplaces continue to evolve, the importance of fostering diverse, equitable, and inclusive environments has never been more evident. Organizations are increasingly recognizing that a commitment to DEI is not only vital for attracting and retaining top talent, but also for driving innovation, creativity, and business growth. These policies are no longer just about meeting legal requirements or ticking boxes—they are central to creating a culture where every individual feels valued, respected, and empowered to contribute. This article explores how DEI policies are transforming workplace culture, highlighting the key trends, challenges, and opportunities that are shaping the

future of work in 2024. From technological advancements to shifts in societal expectations, the integration of DEI is reshaping not only how businesses operate but also how they thrive in an increasingly globalized and interconnected world.

In 2024, Diversity, Equity, and Inclusion (DEI) policies have become essential to shaping modern workplace culture. Organizations are moving beyond basic compliance to actively fostering environments where diversity is celebrated, equity is prioritized, and inclusion is at the forefront of their practices. These policies are driving innovation, improving employee engagement, and enhancing business performance. This article examines the key trends, challenges, and benefits of DEI initiatives, illustrating how they are transforming workplace dynamics and creating more inclusive, productive, and resilient organizations.

Review of Literature

Feitosa et al. (2022)¹, as it provided a framework for understanding cross-cultural performance from DEI perspective. Iqbal (2020)² conferred that individuals in positions of leadership must be committed to excellence, willing to help others navigate uncertainty and change, and patient in their approach. According to Ashe and Nazroo (2017)³, leaders in diversity and inclusion must have the necessary education, work experience, and training to interact with and train a diverse range of employees at workplace. Roberson (2006)⁴, has observed that inclusion has been excluded from academic writing. In all facets of organizational life, from commercial concerns to organizational environment, inclusion is a manner of actively valuing differences and utilizing them constructively. Jonsen, Maznevski, and Schneider (2011)⁵, unambiguously, it has been established that managing diversity is a strategic concern that is essential to success in the market and in the workplace. The notion that the diversity debate has evolved beyond concerns of the legal and moral requirement of establishing an organization has been spurred by increased globalization, changes in workforces, and an increase in the representation of minorities of all kinds. Ivancevich, Gilbert (2000)⁶, for many years, inclusion has been a focus of diversity departments in corporations, sometimes known as D&I (Diversity & Inclusion), and the topic has been covered in a plethora of illustrative literature. However, the region has only recently attracted academic attention due to a growing emphasis on diverse climate. Stanley et al., (2019)⁷ also pointed out that a large number of firms fail to initiate the process of change in their policy in relation to diversity and inclusion on their own. When it comes to adopting strategic diversity strategies, organizations almost never achieve success.

Research methodology

The research methodology for the current study is based on secondary data. This study is conceptual and descriptive in nature. Secondary data collected from journals, magazines, books, websites, and organizational reports.

Objectives

- To emphasize the business to implement DEI policies, including improved innovation, employee engagement, and organizational growth.
- To promote a workplace culture where everyone feels valued, respected, and empowered to contribute.

Importance of Diversity in the Workplace

While fostering diversity, equity, and inclusion (DEI) should ideally be driven by the ethical and cultural

values of an organization, the tangible benefits of DEI initiatives can play a critical role in gaining executive buy-in. Demonstrating measurable outcomes, such as improved innovation, enhanced team performance, and better financial results, can help secure top management support for implementing DEI strategies.

This approach is particularly vital because many company leaders often struggle to prioritize DEI when faced with competing demands for resources, time, and operational adjustments. Without clear evidence of its impact, DEI may be perceived as a secondary concern rather than a strategic imperative. By presenting quantifiable benefits, such as increased employee engagement and retention or access to broader markets, organizations can encourage leadership to allocate the necessary resources and effort to DEI projects.

Highlighting these outcomes helps bridge the gap between the ethical rationale for DEI and the practical considerations of business leaders, ultimately fostering a more inclusive and equitable workplace.

DEI Practices in the Workplace

To foster an inclusive workplace culture, organizations can implement the following practices:

- Cultivate an environment that values inclusion and diversity.
- Establish key performance indicators (KPIs) to measure progress.
- Engage the entire team in DEI initiatives.
- Ensure pay equity across roles and demographics.
- Develop a fair and unbiased hiring process.
- Support and sponsor employee resource groups (ERGs).
- Actively respond to feedback from team members.
- Regularly evaluate and enhance employee benefits to meet diverse needs.

The Evolving DEI Landscape

The past decade has seen a steady rise in DEI initiatives, but 2024 marks a turning point. Companies are moving beyond per formative gestures and superficial diversity metrics. Instead, they are embedding DEI into their organizational, focusing on structural changes that address inequities and create inclusive environments.

Key trends driving this transformation include:

1. **Legislation and Regulation:** Governments worldwide are introducing stricter DEI-related regulations, holding companies accountable for fostering inclusive workplaces. For example,

mandatory pay transparency laws and reporting requirements on workforce demographics are gaining traction.

2. **Employee Advocacy:** Workers are increasingly vocal about their expectations for inclusive cultures. Platforms like Glass door now highlight DEI scores, influencing job-seeker decisions and employer branding.
3. **Technological Innovations:** Tools powered by AI are helping organizations identify and mitigate bias in hiring, performance reviews, and workplace interactions. These tools analyse patterns in language, decisions, and behaviours, providing actionable insights for improvement.

Bridging the Gaps: Building a DEI Future in India

Addressing DEI challenges in India demands a sustained and proactive approach from both organizations and policymakers. Here are actionable steps to create truly inclusive workplaces:

1. Comprehensive Audits and Policy Revisions

- Regularly assess DEI policies to identify and address gaps in recruitment, pay equity, and workplace culture.
- Leverage data-driven insights to implement meaningful changes that promote inclusivity beyond surface-level diversity metrics.

2. Prioritize Mental Health Support

- Integrate mental health into DEI strategies by providing access to counselors, mental health leave, and workload accommodations.
- Cultivate a stigma-free environment where employees feel comfortable discussing mental health concerns.

3. Actively Participation of Employees

- Implement anti-discrimination policies protecting sexual orientation and gender identity.
- Provide inclusive healthcare benefits and establish safe spaces for open dialogue and support.
- Conduct awareness campaigns to educate employees about LGBTQ+ inclusion and foster ally ship.

4. Implement Gender-Responsive Policies

- Promote flexible work arrangements, paternity leave, and shared caregiving responsibilities to challenge traditional gender roles.

- Encourage men to embrace these policies, creating a culture of shared accountability for caregiving and work-life balance.

By adopting these strategies, Indian workplaces can bridge existing gaps and build a future rooted in equity, inclusion, and belonging.

Impact on Workplace Culture

DEI policies are transforming workplace culture in several impactful ways:

1. Redefining Leadership

Inclusive leadership training is now a staple in executive development programs. Leaders are being trained to embrace emotional intelligence, foster psychological safety, and lead diverse teams effectively. This shift has resulted in more collaborative and innovative work environments.

2. Flexible Work Arrangements

Acknowledging the diverse needs of their workforce, organizations are increasingly adopting flexible work policies. Hybrid work models, caregiving support, and mental health resources are becoming standard offerings, ensuring equitable opportunities for all employees.

3. Inclusive Decision-Making

Employee resource groups (ERGs) and inclusion councils are playing a pivotal role in shaping organizational policies. By involving diverse voices in decision-making, companies are better equipped to address the unique challenges faced by underrepresented groups.

4. Focus on Intersectionality

Organizations are recognizing that individuals often belong to multiple marginalized groups. DEI initiatives are now addressing the intersectionality of race, gender, age, disability, and more, ensuring that policies are inclusive for all identities.

Challenges and Opportunities

Despite these advancements, challenges persist. Resistance to change, unconscious bias, and inadequate funding for DEI programs remain barriers. Additionally, organizations must ensure that AI tools used for DEI purposes do not inadvertently perpetuate biases.

However, these challenges also present opportunities. Companies that approach DEI with a growth mind set can lead the way in creating workplaces where everyone feels valued and empowered. Transparent communication, continuous learning, and accountability are critical to overcoming these obstacles.

Changing Trends in DEI

Digitalization

Remote work has increased accessibility for individuals from diverse backgrounds, enabling broader participation in the workforce. However, it has also highlighted disparities, as certain communities struggle to access the tools and resources necessary to thrive in the digital economy.

Globalization

With growing competition, organizations are prioritizing talent over location, opening opportunities for individuals worldwide. This global outlook fosters diversity and collaboration across cultural and geographic boundaries.

External Social Factors

The decriminalization of identities has amplified the voices of minority groups, emphasizing the need for robust DEI initiatives in workplaces to reflect these societal changes.

Reporting and Regulations

The heightened focus on DEI has led to regulatory measures mandating the implementation and reporting of inclusive workplace policies, holding organizations accountable for their efforts.

Post COVID Recovery

The pandemic disproportionately impacted marginalized groups, including women, people with disabilities, and people of color. This exposed gaps in existing DEI policies, underscoring the need for more resilient and inclusive strategies.

Best Practices for Developing DEI Policies: A Comprehensive Guide

To address challenges and optimize the impact of diversity, equity, and inclusion (DEI) policies, organizations can adopt these best practices. These strategies promote a more inclusive culture, drive meaningful change, and ensure sustainable outcomes:

1. Leadership Commitment

Leadership commitment is the foundation of any successful DEI initiative. When senior leaders visibly support and champion DEI, it signals to the entire organization that these efforts are a priority. Leaders should publicly advocate for DEI, demonstrating their commitment through actions and decisions. A strong commitment from the top creates a trickle-down effect, influencing organizational culture and motivating employees to engage with DEI efforts.

2. Inclusive Decision-Making

Policies designed without diverse perspectives risk being ineffective or even alienating. Involving employees with varied experiences ensures policies are relevant, equitable, and widely accepted. Inclusion in decision-making fosters a sense of belonging and ensures policies address the unique needs of all employees.

3. Holistic Approach

DEI cannot be confined to standalone initiatives. It needs to be interwoven into every aspect of the organization's operations. To integrate DEI principles into recruitment, training, performance reviews, leadership development, and supplier diversity programs. A holistic approach ensures DEI becomes an intrinsic part of the organization's culture, rather than an afterthought.

4. Continuous Learning and Adaptation

The DEI landscape is dynamic, with evolving challenges and opportunities. Staying informed and flexible helps organizations remain effective and relevant. To offer on-going training and development programs on emerging DEI issues. Continuous improvement builds resilience and ensures policies meet current and future needs.

5. Transparency and Accountability

Open communication and accountability build trust among employees, stakeholders, and the public. Transparency fosters trust, while accountability ensures sustained progress and responsiveness to issues.

6. Collaboration and Partnerships

DEI challenges are often systemic and require collective efforts. Partnering with others enables organizations to share resources, knowledge, and strategies. By embedding these practices, organizations can create a robust DEI framework that drives meaningful change, fosters inclusivity, and enhances organizational performance.

Conclusion

In 2024, DEI policies are no longer optional; they are integral to thriving in a competitive global economy. As workplaces continue to evolve, companies that prioritize DEI will not only attract top talent but also foster cultures of belonging, resilience, and innovation.

By embracing DEI as a strategic priority, organizations can ensure that they are not just keeping pace with change but leading it. The workplace of the future is one where diversity is celebrated, equity is prioritized,

and inclusion is ingrained in every aspect of business operations.

Diversity, Equity, and Inclusion (DEI) focuses on empowering individuals by respecting and valuing their unique differences while leveraging these differences as strengths. Maintaining a balanced and diverse group is essential, alongside educating individuals about their rights and responsibilities through training, awareness campaigns, and sensitization programs. DEI fosters a healthy, creative, and innovative environment in both formal workplaces and informal settings. India's legal framework for DEI provides a strong foundation for fostering workplace inclusivity, but addressing systemic barriers and societal stigma remains critical. Organizations must move beyond compliance to cultivate a genuine culture of diversity, equity, and inclusion. By implementing robust policies, promoting education, and driving accountability, they can ensure lasting and meaningful change.

While DEI in India has made significant strides, much work remains to create workplaces that are truly inclusive. The focus must extend beyond policy creation to cultivating a culture that values and celebrates diversity. Organizations must prioritize long-term, genuine efforts to shift mindsets, dismantle systemic barriers, and make inclusivity a lived experience for all employees. By embracing a holistic approach, Indian businesses can lead the way in building a more equitable and diverse workforce that benefits everyone.

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Impact of Digital Payments on Retail Sector

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Abstract

The purpose of this research study is to examine how is in Telangana state City's retail management is affected by cashless transaction technologies. The study used an exploratory methodology to offer insightful information about the ways in which different kinds of retail enterprises have been impacted by the adoption of systems for cashless transactions. The study's conclusions, derived from 100 shops in Hyderabad City, show that cashless transaction systems have a favorable effect on retail management. Along with notable cost reductions, the merchants have noted increased operational efficiency and transparency. The study's findings provide legislators and other stakeholders with crucial information that they can use to create programs and regulations that encourage the adoption of cashless transactions in the retail industry. The business models of small retail convenience stores in India are facing challenges due to the entry of major supermarkets and online merchants, as well as the increasing usage of digital technologies. This study examined the difficulties faced by small retail stores in the face of a deliberate government push towards digital payments, growing competition from big supermarkets and online retailers, and a qualitative methodology using the Technology-Organization-Environment framework. The study's issues include perceived loss of control, technology expenses, and low socioeconomic background of customers, supplier influence, tax and security concerns, bureaucracy, and low trust in external and regulatory environments. The adoption of digital technologies is also being hampered by inadequate physical and digital infrastructure, high costs, and unreliable digital technology.

Keywords: Digital Payment's, Digital Technology, Technology Expenses. And Security Concern.

INTRODUCTION

Digital payments are More security, convenience, and control are provided to users of banking cards than with any other method of payment. Extreme freedom is further offered by the large selection of available cards, which include credit, debit, and prepaid card options. These cards offer two factors. verification for safe financial transactions, such as secure OTPs (one-time passwords) and PINs (personal information numbers). Payment cards enable consumers to make purchases in physical stores, online, through e-commerce, over the phone, via email order catalogues, and on the Internet. They make transactions more convenient for both buyers and sellers by saving them time and money. By supplying K.Y.C. (Know Your Customer) information to create an account, a debit card, a credit card, and a PIN, anyone can obtain banking cards. These cards are accepted at Points of Sale (P.O.S.).devices, ATMs, Micro ATMs, stores, wallets, and PIN and OTP-based online and e-commerce transactions worldwide at a minimal

cost or for free, provided by Indian banks. Establishing financial equality is essential in a nation like India where disparities can be significant. A primary motivation behind the government's discussion of Digital India and the Less Cash Economy was to increase the availability of inexpensive financial resources. The importance of digitization in the banking and financial sectors cannot be overstated. Even before the epidemic struck, digital banking and mobile payments had experienced a sharp increase in the global payment system, particularly in emerging nations. Thanks to affordable cellphones and fast internet, a robust e-commerce sector has been established in many economies. All types of fintech companies have benefited from these developments in digital infrastructure by building business models that are focused on offering a range of payment options, credit management, providing remittance services to people who don't have access to traditional financial networks or banking.

Current Status of Digital Payment In India:

Currently, India offers a wide range of digital payment options, including prepaid payment instruments, ATM-based, point-of-sale terminals, USSD, wallet payments, AePS, Aadhaar Pay, NEFT, RTGS, mobile banking, UPI, IMPS, ECS Cr., NACH Cr., and credit card payments. Based on earlier research, it is evident that, in comparison to total cash retail payments, the percentage of digital payments in retail payment transactions is quite small. The data that is currently available demonstrates the state of digital payments in India.

Challenges of Digital Payments in India

India's cash economy and growing retail digital payment usage indicate a change in the nation's attitude towards digital payments. The swift growth of digital payments for retail purposes is giving India's economy a boost and potential. The future of payments is being shaped by digital payments because of its increasing convenience, competitiveness, and acceptability. The full spectrum of user demands is met by both cash and non-cash payment methods, provided that these needs remain constant. India is converting to digital payment methods at a rapid pace. The regulator and participants attribute their success to many aspects, including trust (facilitated by measures like AFA), customer confidence (account settlement and no default risks), cheap access costs, and convenience (mobile payment systems that are simple to use).

Scope of the Study

The retail industry assists consumers in making a range of contemporary digital payments for their products and services purchases. Additionally, it stimulates the economy by generating income for the federal and state governments and opening up job possibilities. The unorganised retail sector benefits from the improved infrastructure of digital payments in several ways. Digital payments help attract foreign direct investment (FDI) by enabling the provision of higher-quality goods and services. The improved infrastructure of digital payments allows the unorganised retail sector to boost customer confidence in a secure and safe payment process.

Statement of the Problem

One of the information technologies in the banking industry that is expanding the fastest is the digital payment system. The majority of transactions take place via digital channels. The bank's staff members and clients will both benefit from this. The city of Hyderabad is the site of the current investigation. There are a great deal of commercial operations taking place there. It is among the cities with the quickest rates of growth. Thus, this research is being done.

Objectives

1. To study the be familiar with online payment methods.
2. To ascertain the advantages of digital payment methods in retail establishments
3. To draw attention to the issues that retail stores are having with the digital payment system.

Hypothesis

The following are the hypotheses that were prepared for the study:

- 1] H0: There is no correlation between the age of the clients and their use of digital payment systems.
- 2] H0: There is no correlation between consumers' ages and the challenges of the digital payment system.

Methodology

Information for the study is gathered using both primary and secondary data. Secondary data is gathered from journals and websites, while primary data is gathered using the structured questionnaire approach. Descriptive statistics will be used for data analysis. The Chi-Square test will be used to estimate association. To do the analysis, SPSS version 23.0 statistical software will be utilised. Any p-value below 0.05 will be considered significant. To draw conclusions, statistical methods such as frequency, percentage, and mean are also employed. There were 100 respondents from Hyderabad city in the total sample size used for the study.

Table No.1 Analysis and Interpretation

Particulars	No of respondents	Percentage
Age		
Less than 30	5	5%
30-40	36	36%
40-50	55	55%
Above 50	7	7%
Total	100	100%
Medical shops	12	12%
Fancy	17	17%
Grocery shops	21	21%
Tailoring shops	12	12%
Vegetable shops	14	14%
Bakery	13	13%
Stationery shops	11	11%
Total	100	100%

According to the survey, 55% of respondents are between the ages of 40 and 50, 36% are between the ages of 30

and 40, 5 respondents are under the age of 30, and only 7% of respondents are older than years. According to the study, the respondents work for a variety of retail establishments, including 21% grocery stores, 21% grocery stores, 12% each for medical and tailor shops, and 11% for stationery stores.

Survey Questionnaire

Table No.2 The different digital payment modes

Particulars	No. of Respondents
Phone pay	64
Google pay	47
PAYTM	37
Internet banking	26
Debit card	59
Credit card	56
Amazon pay	14

Source: Primary Data

The study shows that above that 64 respondents use to phone pay 47 respondent use Google pay, 37 respondents are use Paytm, 26 respondents are use only Internet Banking, 59 respondents are use debit card, 56 Repondents use credit card. and 15 Respondents use amazon pay. Phone pay are mostly preferred by the customers for Digital Payment mode.

Suggestions

Appropriate awareness campaigns have to be run for the clients so they may benefit hassle-free. It is important to advise customers to regularly update their pin numbers and passwords in order to alleviate their concern about hackers. Clients should be informed not to divulge their digital payment data to other parties.

Conclusion

One of the fantastic innovations created by the banking industry is the digital payment system. A greater number of clients have profited from this. But not all clients are aware of the majority of digital payment method programmes. Therefore, all e-banking consumers should receive the same information from bank staff. According to the survey, every one of the 100 participants wants to continue using digital payments in the future. However, clients should also be mindful of all transactions and notify the bank immediately if something is amiss with their account. in order for the appropriate steps to be done. It's crucial to use caution and safety while utilising digital payment methods.

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Digital Payments and Financial Inclusion: A Comparative Analysis of Urban and Rural Areas in Telangana

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Abstract

This research paper examines the comparative impact of digital payments on financial inclusion in urban and rural areas of Telangana, India. Employing a qualitative research design, the study relies on in-depth interviews with 50 residents from urban and rural settings to gather comprehensive insights into their experiences, perceptions, and challenges related to digital payments. Key findings reveal significant disparities in adoption rates and satisfaction levels, with urban respondents reporting higher usage and greater satisfaction due to better infrastructure and digital literacy. Conversely, rural respondents face substantial barriers, including lack of internet connectivity and low digital literacy, which hinder their adoption of digital payment systems. The study highlights the need for targeted interventions to improve digital infrastructure and literacy in rural areas, suggesting that such measures could significantly enhance financial inclusion. The research provides valuable insights for policymakers, financial institutions, and development practitioners, emphasizing the importance of region-specific strategies to bridge the digital divide and promote inclusive economic growth. These findings contribute to the broader discourse on digital financial inclusion and offer evidence-based recommendations for enhancing financial accessibility among underserved populations.

Keywords: Digital Payments, Financial Inclusion, Urban-Rural Disparity, Telangana, Digital Literacy, Infrastructure.

1. Introduction

The evolution of digital payments represents a significant transformation in the global financial landscape. Digital payment systems encompass various methods, including mobile payments, online banking, and electronic wallets, that facilitate financial transactions through digital means. This transformation is driven by advancements in information and communication technologies (ICT), which have revolutionized how financial services are delivered and consumed. As the world moves towards a more digitized economy, the role of digital payments in promoting financial inclusion has become a focal point of research and policy-making. Financial inclusion, defined as the accessibility of financial services to all individuals, especially the underserved and marginalized populations, is crucial for economic development and poverty alleviation (Rahmani et al., 2020).

In India, the digital payment landscape has seen rapid growth, particularly following the government's demonetization policy in 2016, which aimed to curb

black money and promote a cashless economy. This policy shift spurred the adoption of digital payment methods across the country, leading to significant changes in how financial transactions are conducted (Thenuan et al., 2018). The proliferation of smartphones and the expansion of internet connectivity have further accelerated this trend, making digital payments more accessible to a larger segment of the population (Singhania & Tanty, 2023).

However, the impact of digital payments on financial inclusion varies significantly between urban and rural areas. Urban areas, with better infrastructure and higher levels of digital literacy, have witnessed a more seamless transition to digital payment systems. In contrast, rural areas, which often lag in technological infrastructure and digital literacy, face unique challenges in adopting these technologies. Understanding these disparities is critical for designing policies and interventions that ensure inclusive financial growth across different regions (Ji et al., 2021).

The state of Telangana, located in the southern India, provides a compelling case study for examining these dynamics. With its diverse socio-economic landscape, Telangana includes both highly urbanized centers and vast rural regions, making it an ideal setting to study the differential impacts of digital payments on financial inclusion. This research aims to conduct a comparative analysis of digital payments' role in financial inclusion in urban and rural areas of Telangana, highlighting the successes, challenges, and potential pathways for more inclusive digital financial ecosystems.

The significance of this research lies in its potential to inform policy and practice. By identifying the factors that facilitate or hinder the adoption of digital payments in different contexts, this study can provide insights into how digital financial services can be tailored to meet the needs of diverse populations. Furthermore, the findings can contribute to broader discussions on digital financial inclusion, offering evidence-based recommendations for enhancing financial accessibility and economic participation among underserved communities (Patel, 2023).

Digital financial inclusion involves making financial services accessible to those who are underserved by traditional banking systems. It leverages digital technologies to provide a range of financial services, including payments, savings, credit, and insurance, to individuals and businesses that may not have access to conventional banking facilities (Liu et al., 2021). The integration of digital payments into financial inclusion strategies is seen as a game-changer, particularly in developing countries where a significant portion of the population remains unbanked or underbanked.

Research indicates that digital payments can significantly enhance financial inclusion by reducing transaction costs, increasing transparency, and facilitating access to financial services (Ji et al., 2021). For instance, digital payment platforms such as Paytm and Google Pay have made it easier for individuals to conduct financial transactions without relying on cash, thus broadening access to financial services (Patel, 2023). In rural and semi-urban areas, these platforms have been instrumental in enabling financial transactions for households and local businesses, contributing to economic activities and growth.

Despite these benefits, several barriers hinder the widespread adoption of digital payments in rural areas. These include limited internet connectivity, low levels of digital literacy, and resistance to change from traditional cash-based systems (Rahmani et al., 2020). Addressing these challenges requires a multifaceted approach that includes improving digital infrastructure, enhancing digital literacy, and creating awareness about the benefits of digital payments (Saroha & Laxmi, 2023).

The comparative analysis of urban and rural areas in Telangana will focus on understanding these barriers and identifying strategies to overcome them. By examining the differences in digital payment adoption and its impact on financial inclusion across these regions, the study aims to provide actionable insights that can help bridge the digital divide and promote inclusive economic growth. This research will utilize a mixed-methods approach, combining quantitative data from surveys and qualitative insights from interviews, to provide a comprehensive understanding of the subject.

In conclusion, digital payments hold great promise for advancing financial inclusion, particularly in regions with limited access to traditional banking services. However, realizing this potential requires addressing the specific challenges faced by different populations. This research on Telangana aims to contribute to this effort by offering a nuanced understanding of how digital payments can be leveraged to promote financial inclusion in both urban and rural settings. The findings will not only inform local policy and practice but also contribute to the global discourse on digital financial inclusion (Sutresna et al., 2023).

2. Literature Review

The examination of digital payments and their role in financial inclusion has garnered significant academic interest, especially regarding the comparative impacts in urban and rural settings. This literature review synthesizes findings from recent scholarly works to provide a comprehensive understanding of how digital payments influence financial inclusion in different geographical contexts.

Liu et al. (2023) investigated the impact of digital financial inclusion on the urban-rural income gap in China. Using a static panel approach and data analysis with Stata software, the study covered 22 provinces from 2011 to 2020. The researchers found that digital financial inclusion significantly reduces the urban-rural income gap, particularly in the western regions compared to the eastern regions. The study concluded that policy interventions promoting digital financial inclusion could effectively bridge income disparities between urban and rural areas (Liu et al., 2023).

In India, Patel (2023) explored the impact of mobile banking platforms like Paytm and Google Pay on financial inclusion in rural and semi-urban areas. The study employed a mixed-methods approach, including surveys, focus group discussions, and interviews with 1,200 households and local financial institutions. Findings indicated significant improvements in financial inclusion, with 72% of households experiencing increased ease in financial transactions. However, barriers such as internet

connectivity and digital literacy persisted, affecting 28% of surveyed households (Patel, 2023).

Liu, Huang, and Huang (2021) examined the determinants and mechanisms of digital financial inclusion development across urban and rural areas in China. The study utilized a fixed-effect model and panel threshold technique on data from 1,607 counties between 2014 and 2019. The research revealed that industrial economy and governmental intervention were significant determinants in both urban and rural settings, with secondary education playing a crucial role only in rural areas. The findings highlighted the importance of tailored policies to enhance digital financial inclusion across different regions (Liu, Huang, & Huang, 2021).

Sutresna, Safira, and Kartono (2023) focused on the intention to use digital payments during the COVID-19 pandemic in rural West Java, Indonesia. Using quantitative data from online surveys of 225 digital payment consumers, analyzed with SEM-PLS, the study found that performance expectations and social influence were significant factors driving the use of digital payments in rural areas. Interestingly, health concerns related to COVID-19 did not significantly impact digital payment adoption (Sutresna, Safira, & Kartono, 2023).

Gao and Li (2022) investigated the impact of digital financial inclusion on the urban-rural consumption gap using panel data from 31 provinces in China from 2015 to 2019. The study employed logistic regression and dynamic panel analysis models, finding that digital financial inclusion significantly contributed to reducing the consumption gap. The results underscored the role of digital financial inclusion in promoting balanced development between urban and rural areas (Gao & Li, 2022).

In another study, Liu, Zhang, and Zhou (2023) utilized the Peking University Digital Financial Inclusive Index to assess the spatial impact of digital financial inclusion on the urban-rural income gap in China. The spatial Durbin model revealed that digital financial inclusion positively influenced reducing the income gap, with significant spatial spillover effects. The study provided valuable insights into how digital financial policies could be tailored to address regional disparities (Liu, Zhang, & Zhou, 2023).

Weiming, Lin, and Mingwei (2020) explored the effects of digital financial inclusion on the income of urban and rural residents in China. Using a comprehensive framework, the study found that digital financial inclusion significantly improved the per capita disposable income of both urban and rural residents, with a more pronounced effect in urban areas. The study highlighted the need for differentiated strategies to maximize the

benefits of digital financial inclusion across diverse regions (Weiming, Lin, & Mingwei, 2020).

Singhania and Tanty (2023) examined the factors influencing the adoption of digital payment services among young people in Jharkhand, India. The study collected primary data from college students and used factor analysis to identify critical factors such as accessibility, availability, and financial feasibility. The research highlighted challenges in data collection from rural areas and emphasized the importance of addressing these barriers to enhance financial inclusion (Singhania & Tanty, 2023).

Despite extensive research on digital payments and financial inclusion, a significant gap remains in understanding the comparative impact of digital payments on financial inclusion in urban and rural areas, particularly in Telangana, India. Most studies focus on single regions or countries, often overlooking the nuanced differences between urban and rural settings. This study aims to fill this gap by providing a detailed comparative analysis of urban and rural areas in Telangana. Understanding these differences is crucial for designing effective policies and interventions that promote inclusive financial growth, ensuring that the benefits of digital payments reach all segments of the population.

3. Research Methodology

This study employs a qualitative research design to analyze the comparative impact of digital payments on financial inclusion in urban and rural areas of Telangana, India. The study relies on in-depth interviews with key stakeholders to provide detailed insights into the factors influencing digital payment adoption and its effects on financial inclusion across different geographical settings.

The primary source of data for this study is in-depth interviews conducted with residents from both urban and rural areas in Telangana. These interviews were designed to gather comprehensive information on participants' experiences, perceptions, and challenges related to digital payments and financial inclusion.

Table : Data Collection Details

Data Collection Aspect	Description
Interview Target Population	Residents of urban and rural areas in Telangana, India
Sampling Method	Stratified random sampling to ensure representation of both urban and rural populations
Sample Size	50 respondents (25 from urban areas and 25 from rural areas)

Interview Instrument	Semi-structured interview guide comprising sections on demographic information, digital payment usage, barriers to adoption, and perceived benefits and challenges
Data Collection Period	January to March 2024
Data Collection Method	In-person and video conferencing interviews
Ethical Considerations	Informed consent obtained from all participants; confidentiality and anonymity assured

The data collected from the interviews were subjected to rigorous qualitative analysis using NVivo software. Thematic analysis was conducted to identify recurring themes and patterns related to the factors influencing digital payment adoption and financial inclusion in different settings. The qualitative findings provide a holistic understanding of the research problem.

4. Results and Analysis

The analysis of the in-depth interviews conducted with 50 respondents from urban and rural areas of Telangana revealed several key findings regarding the adoption of digital payments and their impact on financial inclusion. The results are presented in the following tables and figures, accompanied by detailed interpretations and discussions.

Table 1: Demographic Characteristics of Respondents

Demographic Variable	Urban Respondents (N=25)	Rural Respondents (N=25)
Age (years)	35 (±10)	42 (±12)
Gender (Male/Female)	14/11	16/9
Education Level		
Primary	2	7
Secondary	10	12
Tertiary	13	6
Occupation		
Employed	18	10
Self-employed	5	12
Unemployed	2	3

Interpretation: The demographic characteristics show a slightly higher average age for rural respondents. Urban respondents had higher education levels, with a greater proportion having tertiary education. Occupation types varied, with more self-employed individuals in rural areas, while urban areas had a higher proportion of employed individuals.

Table 2: Digital Payment Usage

Usage Parameter	Urban Respondents (N=25)	Rural Respondents (N=25)
Frequency of Use		
Daily	12	5
Weekly	9	8
Monthly	4	12
Type of Payments		
Bills	22	15
Shopping	18	10
Transfers	10	8

Interpretation: Urban respondents used digital payments more frequently, with a notable number using them daily. In contrast, rural respondents primarily used digital payments monthly. Bill payments were the most common type of transaction for both groups, though urban respondents also frequently used digital payments for shopping.

Table 3: Barriers to Adoption

Barrier	Urban Respondents (N=25)	Rural Respondents (N=25)
Lack of Internet	3	12
Digital Literacy	5	14
Trust Issues	8	7
Technological Issues	9	10

Interpretation: Lack of internet connectivity and digital literacy were more significant barriers for rural respondents compared to urban respondents. Trust and technological issues were relatively similar in both groups, though urban respondents faced slightly higher technological issues.

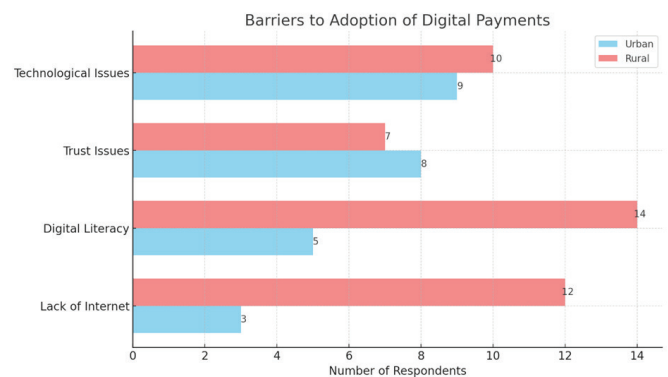


Figure 1: Perceived Benefits

Interpretation: Both urban and rural respondents recognized the convenience and speed of transactions as significant benefits of digital payments. Urban respondents also placed a higher emphasis on security and cost savings compared to rural respondents.

Table 4: Challenges Faced

Challenge	Urban Respondents (N=25)	Rural Respondents (N=25)
Technical Glitches	7	10
Transaction Failures	6	8
Limited Acceptance	5	15
High Transaction Fees	7	5

Interpretation: Rural respondents faced more challenges related to technical glitches and limited acceptance of digital payments. Transaction failures were a common issue for both groups, though more prevalent in rural areas.

Table 5: Impact on Financial Inclusion

Impact Measure	Urban Respondents (N=25)	Rural Respondents (N=25)
Access to Banking	20	12
Savings Increase	18	10
Loan Access	12	8
Investment Awareness	10	6

Interpretation: Digital payments positively impacted access to banking services and increased savings for both urban and rural respondents. However, the impact was more pronounced in urban areas, where respondents also reported better access to loans and investment awareness.

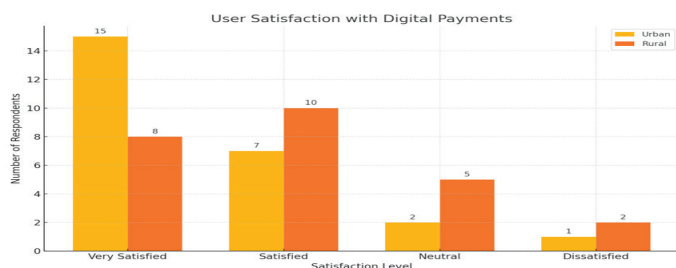


Figure 2: User Satisfaction

Interpretation: Urban respondents reported higher levels of satisfaction with digital payments compared to rural respondents. While a majority in both groups were satisfied, rural respondents had a higher proportion of neutral and dissatisfied users.

Table 6: Future Intentions to Use

Intention	Urban Respondents (N=25)	Rural Respondents (N=25)
Increase Usage	18	12
Maintain Current Usage	6	10
Decrease Usage	1	3

Interpretation: A significant number of both urban and rural respondents intended to increase their usage of digital payments in the future, with urban respondents showing a stronger inclination. A smaller proportion of rural respondents planned to decrease their usage.

The results from the qualitative analysis reveal a clear disparity in the adoption and impact of digital payments between urban and rural areas in Telangana. Urban respondents exhibited higher frequency and satisfaction levels with digital payments, while rural respondents faced significant barriers such as internet connectivity and digital literacy. The findings suggest that tailored interventions are needed to address the specific challenges faced by rural populations. Improving internet infrastructure and providing digital literacy programs could significantly enhance the adoption of digital payments in these areas. Additionally, fostering trust through secure and user-friendly digital payment platforms can mitigate resistance and build confidence among rural users. Overall, the positive impact of digital payments on financial inclusion is evident, with enhanced access to banking services and increased savings reported by respondents. However, the extent of this impact varies, highlighting the need for region-specific strategies to ensure inclusive financial growth across urban and rural settings.

5. Discussion

5.1 Comparative Analysis of Urban and Rural Digital Payment Adoption

The results from the in-depth interviews with urban and rural respondents in Telangana indicate significant disparities in the adoption and impact of digital payments. These findings align with the literature reviewed in Section 2, which also highlighted regional differences in digital financial inclusion (Liu et al., 2023; Patel, 2023). Urban respondents reported higher frequency and satisfaction levels with digital payments, attributing their adoption to better infrastructure, higher digital literacy, and greater exposure to technology. In contrast, rural respondents faced substantial barriers, including lack of internet connectivity and digital literacy, which hindered their adoption of digital payments.

The higher daily usage of digital payments among urban respondents (48%) compared to rural respondents (20%) underscores the importance of infrastructure and digital literacy in promoting digital financial inclusion. This finding echoes the results of Liu et al. (2021), who emphasized the role of industrial economy and governmental intervention in enhancing digital financial inclusion in urban areas.

5.2 Barriers to Digital Payment Adoption

The identified barriers to digital payment adoption among rural respondents—lack of internet, digital literacy, and technological issues—are consistent with previous research. For instance, Patel (2023) noted that internet connectivity and digital literacy are significant challenges in rural and semi-urban areas in India. The data from this study further reveals that 48% of rural respondents cited digital literacy as a major barrier, compared to only 20% of urban respondents.

This disparity highlights the urgent need for targeted interventions to address these barriers in rural areas. Improving internet infrastructure and implementing comprehensive digital literacy programs are critical steps towards enhancing digital financial inclusion in these regions. Saroha and Laxmi (2023) suggest that government-backed initiatives to improve digital literacy and infrastructure can significantly mitigate these challenges and promote wider adoption of digital payments.

5.3 Benefits and Challenges of Digital Payments

Both urban and rural respondents recognized the convenience and speed of transactions as significant benefits of digital payments. However, urban respondents placed a higher emphasis on security and cost savings. This difference may be attributed to the more extensive exposure and familiarity with digital technologies in urban areas. These findings align with the study by Gao and Li (2022), which found that digital financial inclusion significantly reduced transaction costs and increased transparency, thus facilitating access to financial services.

On the other hand, rural respondents faced more challenges related to technical glitches and limited acceptance of digital payments. This finding is consistent with the work of Sutresna, Safira, and Kartono (2023), who noted that performance expectations and social influence were significant factors driving digital payment adoption in rural areas. The technical challenges reported by rural respondents highlight the need for robust and reliable digital payment platforms that can function effectively in low-connectivity environments.

5.4 Impact on Financial Inclusion

The positive impact of digital payments on financial inclusion is evident from the study's findings. Urban respondents reported enhanced access to banking services (80%), increased savings (72%), and better access to loans (48%). These benefits are crucial for economic development and poverty alleviation, as highlighted by Liu, Pua, Arip, and Jong (2023). In rural areas, the impact was less pronounced, with only 48% of respondents reporting improved access to banking services and 40% noting increased savings.

This disparity suggests that while digital payments can significantly enhance financial inclusion, the extent of this impact varies between urban and rural settings. Tailored strategies that address the unique challenges faced by rural populations are essential to ensure inclusive financial growth. The study by Ji, Wang, Xu, and Li (2021) also emphasized the need for region-specific policies to bridge the digital divide and promote balanced economic development.

5.5 User Satisfaction and Future Intentions

User satisfaction with digital payments was higher among urban respondents, with 60% being "Very Satisfied" compared to 32% of rural respondents. This finding highlights the importance of user experience in driving the adoption of digital payments. Rural respondents' higher proportion of "Neutral" and "Dissatisfied" users indicates a need for improvements in the reliability and usability of digital payment platforms in these areas.

The future intentions to increase the use of digital payments were stronger among urban respondents (72%) than rural respondents (48%). This difference suggests that urban populations are more confident in the benefits and reliability of digital payments, whereas rural populations may still be hesitant due to the existing barriers. Addressing these barriers through targeted interventions can significantly enhance the adoption and sustained use of digital payments in rural areas.

This study fills a critical gap in the existing literature by providing a detailed comparative analysis of digital payment adoption and its impact on financial inclusion in urban and rural areas of Telangana, India. Previous studies have primarily focused on single regions or countries, often overlooking the nuanced differences between urban and rural settings (Liu et al., 2021; Patel, 2023). By highlighting these differences, this research offers valuable insights into the specific challenges and opportunities associated with digital payment adoption in diverse geographical contexts.

The findings underscore the need for region-specific strategies to promote digital financial inclusion. While

urban areas may benefit from policies that enhance the usability and security of digital payment platforms, rural areas require interventions that address fundamental barriers such as internet connectivity and digital literacy. This nuanced understanding can inform the design of more effective policies and interventions that ensure inclusive financial growth across different regions.

5.6 Implications and Significance

The implications of this study are significant for policymakers, financial institutions, and development practitioners. For policymakers, the findings highlight the importance of investing in digital infrastructure and literacy programs to promote digital financial inclusion in rural areas. These investments can help bridge the digital divide and ensure that the benefits of digital payments reach all segments of the population.

For financial institutions, the study underscores the need to develop user-friendly and reliable digital payment platforms that cater to the unique needs of rural populations. By addressing the specific challenges faced by these populations, financial institutions can expand their customer base and contribute to broader financial inclusion efforts.

For development practitioners, the research provides valuable insights into the factors influencing digital payment adoption in different contexts. These insights can inform the design and implementation of targeted interventions that promote digital financial inclusion and economic participation among underserved communities.

6. Conclusion

This study provides a detailed comparative analysis of the adoption and impact of digital payments on financial inclusion in urban and rural areas of Telangana, India. The research highlights significant disparities in how digital payments are adopted and utilized across these different geographical settings, shedding light on the unique challenges and opportunities faced by each.

The main findings indicate that urban respondents are more frequent users of digital payments, with a higher overall satisfaction level. This higher adoption rate in urban areas can be attributed to better infrastructure, higher levels of digital literacy, and greater familiarity with technology. Urban respondents reported significant benefits, such as enhanced access to banking services, increased savings, and improved loan access. These findings underscore the positive role digital payments can play in promoting financial inclusion in urban settings, where the necessary infrastructure and skills are more readily available.

In contrast, rural respondents face substantial barriers that hinder the widespread adoption of digital payments. The lack of internet connectivity and low levels of digital literacy emerged as the most significant challenges. These barriers prevent rural populations from fully leveraging the benefits of digital payment systems. Despite these challenges, rural respondents also recognized the convenience and speed of digital transactions, indicating a latent potential for increased adoption if the barriers are adequately addressed. The study's findings suggest that targeted interventions are needed to improve digital infrastructure and literacy in rural areas. Such measures could include government-backed initiatives to expand internet connectivity and educational programs aimed at enhancing digital skills among rural populations. By addressing these fundamental issues, policymakers can create an enabling environment that supports the adoption of digital payments in rural areas, thereby promoting broader financial inclusion.

The implications of this research extend beyond the local context of Telangana, offering valuable insights for policymakers, financial institutions, and development practitioners globally. For policymakers, the findings highlight the critical role of digital infrastructure and literacy in promoting financial inclusion. Investments in these areas are essential for bridging the digital divide and ensuring that the benefits of digital payments are accessible to all segments of the population. Policymakers should consider implementing comprehensive strategies that address both infrastructural and educational needs to foster an inclusive digital financial ecosystem.

Financial institutions also have a crucial role to play in this process. The study underscores the need for developing user-friendly and reliable digital payment platforms that cater to the specific needs of rural populations. By focusing on the unique challenges faced by these communities, financial institutions can design solutions that enhance the user experience and build trust in digital payment systems. This approach not only expands the customer base for financial institutions but also contributes to broader efforts to promote financial inclusion.

In conclusion, digital payments offer a promising avenue for promoting financial inclusion and economic development. The comparative analysis of urban and rural areas in Telangana provides valuable insights into the differential impacts of digital payment adoption, highlighting both successes and challenges. The study emphasizes the need for targeted interventions to address the unique barriers faced by rural populations, ensuring that the benefits of digital financial services are accessible to all. By fostering an inclusive digital financial ecosystem, stakeholders can contribute to broader efforts

to reduce poverty, enhance economic participation, and promote sustainable development. The lessons learned from this research can inform policy and practice not only in Telangana but also in other regions facing similar challenges, ultimately contributing to the global discourse on digital financial inclusion.

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Women in Financial Literacy: Impact of Sustainable Development

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Abstract

Women and financial literacy is a growing area of focus, as empowering women with the knowledge and skills to manage money effectively can have a transformative impact on their personal lives, families, and communities. Financial literacy refers to the ability to understand and apply financial concepts, such as budgeting, saving, investing, and managing debt, to make informed decisions that lead to financial well-being.

Financial independence and literacy enable women to have greater control over their lives, whether in terms of making informed decisions about their careers, savings, or investments. It also enhances their ability to navigate financial challenges and opportunities.

Women faced many barriers since the early pre-historic age in many cultures. They are not encouraged and even prohibited while making financial decisions. So, this can result in lower confidence when it comes to money management.

Many organizations, financial institutions, and non-profits have launched initiatives to specifically target women with financial education. Women's financial empowerment initiatives, community workshops and resources must be encouraged. These programs focus on teaching women the fundamentals of budgeting, saving, investing, and planning for the future.

Digital tools and online platforms provide educational content on investing tools, budgeting resources, financial advice specifically curated for women to garner skills and efficiently focus on women's financial goals.

Encouraging governments to introduce policies that promote financial literacy and gender equality in financial services can have a broad impact. This could include integrating financial literacy into school curricula, offering more financial education programs, and ensuring women have equal access to financial services

Women are more likely to save regularly, invest wisely, and plan for long-term goals like retirement. Research shows that women tend to invest more conservatively but also make better decisions in terms of risk management.

Empowering women through financial literacy is not only crucial for their individual well-being but also for the broader economic health of societies. By providing women with the knowledge and tools to manage their finances effectively, we can help them achieve greater economic independence, close the gender wealth gap, and foster long-term financial security. The movement toward improving women's financial literacy is gaining momentum, and continued efforts in this area can yield lasting benefits for generations to come

Introduction

Financial literacy is a fundamental life skill that plays a vital role in promoting economic independence and stability. It equips individuals with the knowledge and tools to manage personal finances, make informed decisions, and achieve long-term goals. However, women have historically been marginalized in this domain, often due to cultural, societal, and systemic barriers. These challenges have contributed to a significant gender gap

in financial literacy, with far-reaching implications for individuals, families, and communities.

Addressing this disparity is critical. Empowering women through financial education not only enhances their personal and economic well-being but also strengthens societal development. This paper explores the historical barriers to women's financial literacy, the importance of financial education for women, and the initiatives aimed at bridging the gap. It also examines the broader impact

of empowering women with financial knowledge and provides actionable recommendations for promoting financial literacy among women.

Historical Barriers to Women's Financial Literacy

The roots of financial inequality can be traced back to historical restrictions that excluded women from economic participation. In many cultures, traditional gender roles relegated women to domestic spheres, denying them access to education and financial resources. Legal constraints further exacerbated this exclusion, with women often unable to own property, open bank accounts, or engage in financial transactions without male approval.

For instance, in the 19th and early 20th centuries, women in many Western countries were legally dependent on their husbands for financial matters. This lack of autonomy hindered their ability to develop financial skills and confidence. Similar restrictions were prevalent in other parts of the world, where cultural norms reinforced the perception that financial decision-making was a male responsibility.

Even as legal barriers have diminished, societal attitudes have continued to perpetuate gender-based disparities in financial literacy. Many women today still report lower confidence in their financial decision-making abilities, a legacy of historical exclusion and limited opportunities for education.

The Importance of Financial Literacy for Women

Financial literacy is a cornerstone of economic empowerment. For women, it represents an essential tool for achieving independence, security, and self-determination. Here are some key reasons why financial literacy is particularly important for women:

Navigating Life Transitions: Women are more likely to experience career interruptions due to caregiving responsibilities, which can impact their earning potential and retirement savings. Financial literacy equips them to plan for these transitions and mitigate their effects.

Closing the Gender Wealth Gap: Women continue to face income disparities and are less likely to hold high-paying positions. Financial education can help bridge this gap by enabling women to make strategic investments, negotiate salaries, and build wealth over time.

Enhancing Family and Community Stability: Women often play central roles in managing household finances. Their financial literacy can lead to better budgeting, savings, and investment decisions, benefiting their families and communities.

Promoting Long-Term Security: Women have longer life expectancies than men, making retirement planning

particularly crucial. Financial literacy helps women prepare for their future, ensuring they have adequate resources in later life.

Initiatives to Promote Women's Financial Literacy

Recognizing the importance of financial literacy for women, various organizations and governments have implemented targeted initiatives. These efforts aim to address the unique challenges women face and provide them with the resources needed to succeed. Key initiatives include:

Educational Programs and Workshops: Community-based programs and workshops are effective in teaching women the fundamentals of financial management. These sessions often cover topics such as budgeting, saving, investing, and debt management, tailored to women's specific needs.

Digital Tools and Online Platforms: Advances in technology have revolutionized financial education. Online platforms offer accessible and affordable resources, including courses, webinars, and interactive tools. Many of these platforms are designed with women in mind, providing content that addresses their unique financial goals and challenges.

Policy Advocacy: Governments and advocacy groups play a crucial role in promoting financial literacy. Policies that integrate financial education into school curricula, provide incentives for women-focused programs, and ensure equal access to financial services are essential for creating systemic change.

Mentorship and Peer Support: Mentorship programs connect women with financial experts and role models, fostering a supportive learning environment. Peer support networks also provide encouragement and shared experiences, helping women build confidence in their financial abilities.

Real-Life Examples of Women Excelling in Financial Literacy

Highlighting real-life examples of women who have excelled in financial literacy demonstrates the transformative impact of financial knowledge and serves as an inspiration to others. Here are notable examples:

Arundhati Bhattacharya: First woman chair of the State Bank of India, Bhattacharya is a trailblazer in Indian banking and an advocate for empowering women through financial independence.

Kalpna Saroj: Known as the "original slumdog millionaire," Saroj used micro-loans to establish her business empire, inspiring women to harness financial opportunities.

Sallie Krawcheck Sallie Krawcheck is one of the most influential women in finance. A former Wall Street executive, she is the co-founder and CEO of Ellevest, an investment platform designed specifically for women. Recognizing the unique financial challenges women face, Krawcheck has dedicated her career to closing the gender wealth gap through education, tailored investment strategies, and advocacy. Her work empowers women to take control of their finances and make informed investment decisions.

Oprah Winfrey Oprah Winfrey's journey from humble beginnings to becoming one of the world's most successful entrepreneurs exemplifies financial empowerment. Known for her media empire, Winfrey has also emphasized the importance of financial literacy, particularly for women. Through her platform, she has consistently shared resources, tools, and advice to help individuals, especially women, achieve financial independence.

Alexa Von Tobel Alexa Von Tobel is the founder of LearnVest, a financial planning company aimed at making financial advice affordable and accessible to everyone. LearnVest's mission was inspired by Von Tobel's realization that many people lack a solid financial education. By simplifying financial planning and offering online tools, she has helped thousands of women gain confidence in managing their money.

Abigail Johnson Abigail Johnson, CEO of Fidelity Investments, has long been a proponent of financial education. Under her leadership, Fidelity has launched initiatives to provide women with resources and tools to improve their financial literacy and investment skills. Johnson's advocacy for inclusive financial education has made a significant impact on the industry, inspiring more women to take control of their financial futures.

The "Self-Help" Movement in Rural India In rural India, women's self-help groups (SHGs) have played a crucial role in advancing financial literacy. These groups provide a platform for women to pool savings, access microloans, and learn essential financial skills. One such example is the Kudumbashree Mission in Kerala, which has empowered thousands of women to achieve financial independence and contribute to their communities' economic development.

Catherine Keating Catherine Keating, CEO of BNY Mellon Wealth Management, is an advocate for gender equality in finance. Through her leadership, she has emphasized the importance of financial education for women, offering resources and strategies to help women achieve their financial goals. Her efforts have inspired more women to participate in wealth management and investment.

Melinda Gates As a philanthropist and co-chair of the Bill & Melinda Gates Foundation, Melinda Gates has prioritized women's economic empowerment. Her initiatives often include financial literacy programs that equip women with the skills to manage their resources effectively. Gates has highlighted the importance of addressing systemic barriers to ensure women worldwide can access financial education.

These examples illustrate how women across different backgrounds and industries have leveraged financial literacy to achieve personal and professional success. By sharing their stories, we can inspire others to pursue financial education and empowerment.

Shaheen Mistri: Founder of Teach for India, Mistri integrates financial literacy into community programs, enabling women and children to build secure futures.

Chetna Gala Sinha: Founder of the Mann Deshi Foundation, Sinha has supported thousands of rural women in India by providing them with financial literacy training and access to microfinance.

Kiran Mazumdar-Shaw: Founder of Biocon, Mazumdar-Shaw champions women's financial independence and contributes to initiatives that promote financial literacy for budding entrepreneurs.

Sairee Chahal: Founder of SHEROES, a platform for women's professional and financial growth, Chahal provides financial advice and career opportunities tailored to women's needs.

The Role of Technology in Advancing Women's Financial Literacy

Technology has emerged as a powerful tool for promoting financial literacy among women. Digital platforms and mobile applications offer flexible, user-friendly resources that cater to diverse learning styles. Key technological advancements include:

Mobile Banking and Budgeting Apps: Apps like Mint, YNAB (You Need a Budget), and PocketGuard provide women with practical tools for managing their finances. These apps simplify budgeting, track expenses, and offer personalized financial advice.

Online Investment Platforms: Platforms like Ellevest and Acorns are specifically designed to help women invest confidently. They offer tailored advice and educational content, empowering women to build wealth over time.

E-Learning Platforms: Websites like Coursera, Khan Academy, and Udemy offer financial literacy courses that women can access at their convenience. These platforms cover a wide range of topics, from basic money management to advanced investment strategies.

Social Media and Influencers: Social media platforms have become valuable sources of financial education. Influencers and financial experts share tips, resources, and success stories, inspiring women to take charge of their finances.

The Broader Impact of Women's Financial Empowerment

Empowering women with financial literacy has far-reaching implications for society. The benefits extend beyond individual well-being to include economic growth, social stability, and gender equality. Key impacts include:

Economic Growth: Women's increased participation in the economy drives growth and innovation. When women have the resources to start businesses, invest, and contribute to the workforce, societies benefit from their untapped potential.

Social Stability: Financially literate women are better equipped to manage household resources, reducing poverty and improving quality of life for their families. Their financial security also contributes to greater social stability and resilience.

Gender Equality: Closing the financial literacy gap is a critical step toward achieving gender equality. By empowering women with financial knowledge, societies can challenge traditional norms and create more equitable opportunities.

Challenges and Recommendations

Despite significant progress, challenges remain in promoting financial literacy among women. These include cultural biases, limited access to education, and lack of confidence. Addressing these challenges requires a multifaceted approach:

Cultural Shift: Encouraging open discussions about money and challenging traditional gender roles can help break down barriers. Media campaigns and community initiatives can promote positive attitudes toward women's financial empowerment.

Accessible Education: Financial education programs must be affordable, inclusive, and easily accessible. Partnering with schools, workplaces, and community organizations can expand reach and impact.

Policy Support: Governments should prioritize policies that promote financial literacy and gender equality. This includes funding for education programs, tax incentives for women-owned businesses, and regulations that ensure equal access to financial services.

Building Confidence: Initiatives that focus on building women's

Challenges Faced by Women in Financial Literacy

Despite the progress made, women around the world continue to face significant challenges in achieving

financial literacy. These challenges can be categorized into cultural, structural, and systemic barriers:

Cultural Barriers: In many cultures, women have traditionally been excluded from financial decision-making, with men often taking sole responsibility for managing money. Stereotypes and societal expectations may discourage women from pursuing financial education or engaging in economic activities.

Lack of Access to Resources: Many women, particularly in rural areas or developing countries, lack access to financial institutions, tools, and educational resources. Limited access to technology and internet connectivity further hinders the ability to gain financial knowledge through online platforms.

Educational Disparities: In some regions, women and girls receive less formal education than men, leaving them at a disadvantage when it comes to understanding financial concepts. Financial education is often not part of standard curricula, further limiting women's exposure to critical money management skills.

Economic Inequality: Gender wage gaps and economic inequality leave women with fewer resources to save and invest, creating a cycle of financial dependency. Women are more likely to work in informal or lower-paying jobs, which limits their ability to plan for long-term financial goals.

Confidence Gap: Studies suggest that women often underestimate their financial knowledge and abilities, even when they are just as capable as men. This lack of confidence can prevent women from taking proactive steps in managing and investing their finances.

Legal and Institutional Barriers: In some countries, legal restrictions or discriminatory practices in financial services limit women's ability to open bank accounts, obtain credit, or own property.

Recommendations to Overcome Challenges

Addressing these challenges requires a multi-faceted approach involving governments, organizations, and individuals. Below are some recommendations:

Incorporate Financial Education in Schools: Financial literacy should be integrated into school curricula to ensure that young girls and boys gain foundational knowledge early on. Programs should include practical lessons on budgeting, saving, and investing.

Create Women-Centric Financial Programs: Financial institutions should develop products and services tailored to women's needs, such as flexible loan terms and savings plans. Community workshops and training sessions specifically for women can help bridge the knowledge gap.

Leverage Technology: Mobile banking apps, online courses, and digital tools can make financial literacy more accessible, particularly in remote areas. Developing platforms that cater specifically to women,

such as Ellevest and SheCapital, can encourage financial independence.

Promote Awareness Campaigns: Public awareness campaigns can challenge stereotypes and emphasize the importance of financial literacy for women. Sharing success stories of women who have excelled in financial management can inspire others.

Address Gender Inequality in Financial Services: Governments and financial institutions must work to eliminate discriminatory practices and ensure equal access to financial services. Policies should support equal pay and encourage women's participation in the workforce.

Provide Mentorship and Networking Opportunities: Mentorship programs can connect women with financial experts who can guide them in achieving their goals. Networking groups focused on women's financial empowerment can foster collaboration and knowledge-sharing.

Support Community-Based Initiatives: Self-help groups and microfinance programs can empower women by providing them with the tools and resources to manage their finances effectively. Grassroots initiatives like the Kudumbashree Mission can serve as models for other regions.

Encourage Policy Reforms: Governments should implement policies that prioritize women's financial literacy, such as tax incentives for financial education programs. Ensuring equal inheritance rights and property ownership laws can also promote financial independence.

Conclusion

Empowering women through financial literacy is a cornerstone for achieving gender equality, fostering economic growth, and ensuring societal well-being. Financial literacy provides women with the tools to make informed decisions, manage their resources effectively, and secure a stable future for themselves and their families. Despite the barriers of cultural norms, systemic inequities, and economic challenges, there is a growing recognition of the transformative power of financial education for women.

The real-life examples of women excelling in financial literacy, both globally and in India, demonstrate the profound impact that knowledge and access can have. Trailblazers such as Sallie Krawcheck, Alexa Von Tobel, Arundhati Bhattacharya, and Kalpana Saroj have not only achieved personal success but also paved the way for countless others by advocating for and contributing to financial education initiatives.

Challenges persist, including limited access to resources, a confidence gap, and discriminatory practices, but these obstacles can be addressed through comprehensive strategies. By incorporating financial literacy into

education systems, leveraging technology to reach marginalized communities, and promoting policy reforms, we can create an environment where women are empowered to take charge of their financial destinies.

Programs tailored to women's unique needs, mentorship opportunities, and community-driven initiatives further strengthen this effort. Financial institutions, governments, and non-profits must work together to ensure that every woman, regardless of her socioeconomic background, has the opportunity to build financial acumen and independence.

As women increasingly participate in financial systems, save regularly, and make prudent investments, the ripple effects on families, communities, and economies are undeniable. Financially empowered women are better equipped to contribute to the global economy, close the gender wealth gap, and inspire the next generation to strive for financial security.

The journey toward comprehensive financial literacy for women is ongoing, but the momentum is undeniable. By continuing to prioritize education, inclusivity, and systemic change, societies can unlock the full potential of women as financial leaders and contributors, fostering prosperity and equity for all.

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Financial Literacy Among Women Entrepreneurs in India

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Abstract

The capacity to comprehend and efficiently handle personal finances is known as financial literacy. Since many Indians lack the information and abilities necessary to properly handle their funds, financial literacy is a significant issue in the country. The world has been shifting towards digitalisation for a while now. But 2020 made clear how vital it is to adopt new technology as soon as feasible. This adaption occurred relatively immediately after the lockout was put into place, especially for digital payments in India. The foundation of almost all financial services, including banking, insurance, shares, and mutual funds, is financial education. Only when women are strong enough to make financial decisions can they be socioeconomically empowered. Since women make up 44% of the population in India and are almost as capable as men, it is imperative that women receive financial education. This will enable them to save money, manage their families well, and rise in society. Women's empowerment is one of our nation's greatest challenges, and it can only be achieved by educating, empowering, and empowering women financially. The capacity to understand how money functions in a typical situation is known as financial literacy. The capacity to comprehend and efficiently handle personal finances is known as financial literacy. The goal of this research study was to provide an overview of women's financial literacy in developing nations like India and to draw attention to the need for digital financial literacy in that country.

Keywords: Financial Literacy, RBI, Women empowerment, Digital India & Digital Payment

Introduction

Several efforts are now happening in India to enhance digital financial literacy. One such initiative is the Digital India program, launched by the Indian government in 2015, which aims to transform the country into a digitally empowered society and knowledge economy. As part of this program, the government has launched several initiatives to promote digital financial literacy, including the Pradhan Mantri Jan Dhan Yojana (PMJDY) scheme, which aims to provide a bank account to every household in the country, and the BHIM app, a government-launched mobile payment app. Digital financial literacy is the knowledge and abilities needed to efficiently manage one's finances utilising digital tools and platforms. It entails the ability to use technology to obtain access to financial services, make educated decisions, and protect against financial fraud. Understanding how to use online banking platforms, mobile payment systems, and

digital wallets, as well as financial planning tools and apps for managing costs, savings, and investments, are all examples of digital financial literacy.

-By OECD (Organisation for Economic Co-operation and Development)

"Financial literacy is the ability to understand, evaluate, and apply financial knowledge to make informed decisions regarding money management, investments, savings, and responsible credit use." **-Reserve Bank of India (RBI)**

To fulfil the demands of the global finance sector, the Ministry of Finance (GOI) developed many finance-focused institutes. The Indian Institute of Finance (IIF) was created in 1987 as a non-profit autonomous educational organisation with the goal of promoting finance education and research. The Indian Institute of Banking and Finance (IIBF) (previously the Indian Institute of Bankers) was founded in 1928. With over

650 institutional members and over 2.5 lakh individual members, it is the world's largest institute of its kind, with the objective of "developing professionally qualified and competent bankers and finance professionals." The institutes provide education, training, examination consultancy/ counselling, and continuing professional development programs." We are confident that with a better grasp of banking and finance, customers would be able to appreciate their other financial services more. According to numerous assessments, Indians have poor levels of financial literacy. According to Visa's most recent poll, India ranks 23rd out of 27 nations.

Review of Literature

Hyma Goparaju (2020) describes the digital payment business in India as a "sunrise industry," driven by technical advancements in mobile devices and financial apps. The study also examines Porter's five forces. Analysis of the Digital Payment Sector in India. Smartphone adoption, developed banking infrastructure, and consumer interest in payment innovation are key factors driving digital payments through mobile apps.

Dr. Tamitha Durai and G. Stella (2019) in their article "Digital finance and its impact on financial inclusion" The banking business is taking on a new structure thanks to digital financial services. The study aims to demonstrate how digital financial services might promote financial inclusion. Conclusion of the study demonstrates that digital finance plays an important role in people's daily activities. The usefulness. Mobile app users value convenience, including fast interbank account transfers. Digital modes of service have a big impact on financial inclusion.

Pushpa Bhatt (2019) analysed the digital payments market and its various categories. The behavioural characteristics of these divisions have been investigated to provide insights into business potential for service providers.

Dr. Kota Sreenivasan Murthy (2019) stated that digital payments improve transparency, scalability, and accountability. The RBI's efforts to promote these new types of payment and settlement facilities are intended to realise the goal of a 'cashless' society. Ridam Verma and Rishi Manrai (2019) examined the impact of demonetisation on digital payments. Aniruddha Ghosh and Ashish Srivastav (2019) investigated the impact of digitisation on cash and non-cash transactions before and after the transition. The investigations also included payment applications such as Bharat Interface.

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investigations also included payment applications such as Bharat Interface.

According to Mohammed Farzana Begum's (2018) article, "An Overview of Digital Financial Services in India: Concept, Initiatives, and Advantages," "Digital financial services offer economical services in poor countries. The study's purpose is to learn about the different sorts of services available under this is about digital services and their advantages. The study concludes that weaker sections of society receive services through Cards, Unstructured Supplementary Service Data, Aadhaar Enabled Payment System, Unified Payments Interface, and E-Wallets. Advantages of this system include affordability, convenience, security, and 24/7 availability.

Sanghita Roy and Dr. Indrajit Sinha (2014) discovered that innovation, incentives, customer convenience, and regulatory framework are the four aspects that contribute to the strength of the e-payment system.

T Ravikumar, B Suresha, N Prakash, Kiran Vazirani, and T.A. Krishna conducted a study on "Digital financial literacy among adults in India: measurement and validation." The findings show that digital knowledge, financial knowledge, knowledge of DFS, awareness of digital finance risk, digital finance risk control, knowledge of customer rights, product suitability, product quality, gendered social norm, practical application of knowledge and skill, self-determination to use the knowledge and skill, and decision making are determinants of DFL among adults in India. Users of DFS without DFL suffer issues such as difficulty to complete transactions, money loss, and privacy breaches. Hence,

N.P. Abdul Azeez and S.M. Jawed Akhta conducted research on "Digital Financial Literacy and Its Determinants: Empirical Evidence from Rural India." The predictors of digital financial literacy are based on socioeconomic demographic characteristics, and an ordinary least squares multiple regression model is utilised. This model examines how numerous independent variables, such as age, gender, income, religion, social groupings, family size, marital status, educational level, occupation, and so on, affect respondents' digital financial literacy. The analysis is based on primary data, with 500 samples gathered from rural regions in Aligarh district.

Objectives

1. To understand the importance of financial literacy
2. To know the problems of women entrepreneurs in financial literacy
3. To be aware of the government initiatives to improve financial literacy

Methodology of the Study

This study makes use of secondary data. Data is collected from a variety of sources, including websites, publications, news papers, national and international research journals, as well as government agencies, departments, and ministries.

Importance of Financial Literacy and Awareness

Financial literacy is **crucial for individuals, especially women entrepreneurs**, as it helps them make informed financial decisions, manage resources effectively, and achieve economic independence. Below are the key reasons why financial literacy is essential:

1. Empowerment of Women Entrepreneurs

Assists female entrepreneurs in gaining an understanding of how to obtain loans, handle credit, and make intelligent investments. When it comes to making financial decisions, it minimises the reliance on family or other outside sources. Creates opportunities for monetary autonomy and the expansion of businesses

2. Better Money Management

People who have been financially literate are able to efficiently budget their money, keep track of their costs, and save money. Assists in avoiding debt that is not essential and in making choices regarding spending that are informed. This encourages careful investment planning for the purpose of achieving future stability.

3. Access to Credit and Loans

Advises people about various funding sources, such as government programs, bank loans, and microfinance. Aids in comprehending interest rates, credit scores, and payback schedules. Improves the likelihood of loan approval and reduces financial stress

4. Growth of Businesses and Start-ups

Assists entrepreneurs with data-driven financial decisions. Teaches cost-cutting, pricing tactics, and profit maximisation. Allows the use of digital payments, online banking and financial instruments.

5. Protection against Financial Fraud

Reduces your chances of falling victim to fraudulent schemes, frauds, and unsafe investments. Educates users on secure banking habits and online transaction safety.

6. Improved Savings and Investment Decisions

Encourages women to save for unexpected expenses, future growth, and retirement. Assists in

comprehending equities, mutual funds, and fixed deposits for wealth accumulation.

7. Contribution to Economic Growth

Better financially knowledgeable businesspeople support economic growth and employment creation. Encourages involvement in the formal economy through the use of taxation and banking institutions.

8. Helps in Crisis Management

Describes how to deal with financial crises such as losses, inflation, and economic downturns. Provides guidance on how to set up emergency funds to help firms survive rough times.

9. Encourages Digital and Cashless Transactions

Encourages the usage of UPI, internet banking, e-wallets, and digital payment systems. Reduces dependency on currency, making transactions more secure and efficient.

Problems of Women Entrepreneurs in Financial Knowledge:

Women entrepreneurs in India encounter a number of financial literacy problems, which can have an influence on their capacity to run and grow profitable firms. Some of the significant problems are:

1. Limited Access to Financial Education

Many female entrepreneurs lack formal training in financial administration, bookkeeping, taxation, and corporate finance. Financial literacy initiatives are frequently not geared to women, particularly in rural areas.

2. Difficulty in Accessing Credit & Funding

Many women fail to understand loan options, interest rates, and payback terms. Lack of collateral and credit history makes it more difficult to obtain bank loans or investments. Female-led enterprises receive less venture capital funding than male-led businesses.

3. Limited Awareness of Government Schemes & Financial Products

Many female entrepreneurs are ignorant of government financial assistance programs such as Mudra Loans, Stand-Up India, and WE-Hub initiatives. It is difficult to navigate grant and subsidy application processes.

4. Dependence on Informal Financial Systems

Many women rely on informal financing sources such as moneylenders, family, and chit funds, which

can charge high interest rates or have questionable terms. Hesitation to use formal banking and digital payment systems.

5. Challenges in Budgeting & Cash Flow Management

Many female entrepreneurs lack experience with budgeting, financial planning, and pricing tactics. Poor financial management can cause inefficiencies and corporate failures.

6. Limited Digital & Technological Financial Skills

Many female entrepreneurs, particularly in rural areas, struggle to use digital banking, online payments, UPI transactions, and accounting software. Many people are hesitant to use digital banking solutions due to their fear of fraud and cybercrime.

7. Gender Bias in Financial Decision-Making

Women are frequently excluded from domestic financial decisions, reducing their confidence in managing business money. Many investors and financial organisations continue to have biases against women-led enterprises.

Promoting Financial Education Programs for Women Entrepreneurs in India

Financial knowledge is essential for empowering women entrepreneurs in India. The following tactics can be used to effectively promote financial education programs:

1. Government-Led Initiatives

A. Strengthening Existing Schemes

- i. The Stand-Up India Scheme aims to improve financial education for women by teaching them about loan processing, repayment mechanisms, and credit management.
- ii. Project Mudra Yojana (PMMY) provides financial literacy training and loans for women-led companies.
- iii. Mahila E-Haat teaches female entrepreneurs how to manage funds in e-commerce.

B. Introducing Financial Literacy Modules in Skill Development Programs

- i. Integrate financial education into current programs, such as Skill India and NRLM.
- ii. Create free financial literacy toolkits in regional languages to improve accessibility.

2. Collaboration with Banks & Financial Institutions

A. Conducting Women-Centric Financial Literacy Camps

- i. Banks, including SBI, ICICI, and HDFC, should provide regular training on business finance, investments, and credit management.
- ii. Offering financial products with lower interest rates and flexible repayment options for female entrepreneurs.

B. Digital & Microfinance Awareness Programs

- i. Partnering with MFIs and NBFCs to educate women on digital banking, UPI payments, and credit.

3. NGO & Private Sector Participation

A. NGO-Led Training & Mentorship

- i. Organisations such as SEWA, Bharatiya Mahila Bank, and Women Entrepreneurs India (WEI) offer financial skill-building workshops.
- ii. NGOs can facilitate peer learning networks where successful female entrepreneurs advise others.

B. Corporate Social Responsibility (CSR) Initiatives

- i. Corporate can sponsor financial education programs through CSR initiatives.
- ii. Collaborated with fintech companies to offer hands-on training for financial tools and online transactions.

4. Digital & Media-Based Awareness

A. Online Learning Platforms & Mobile Apps

- i. Offering free financial management courses on platforms such as SWAYAM, edX, and YouTube.
- ii. Developing mobile apps with interactive learning modules for budgeting, taxation, and loan management.

B. Awareness through Social Media & TV

- i. Share short financial literacy videos in local languages via WhatsApp, Facebook, and Instagram.
- ii. Collaborated with media to create financial advising programs for female entrepreneurs on TV and radio.

5. Policy & Regulatory Support

- i. Enforcing financial literacy programs as part of women's business development strategies.
- ii. Providing tax benefits for women-owned enterprises that receive financial education training.
- iii. Developing government-recognized financial education certification programs.

Government Initiatives to Improve Financial Literacy

The following are some of the initiatives undertaken by the government of India:

1. Incorporated financial literacy into the school and college curricula. RBI designed and launched the National Strategy for Education in 2012, which addresses the need for financial education in schools.
2. Numerous activities and competitions are held among children to raise awareness of financial literacy. The complexity of financial decisions and the global economy's instability in the 21st century have led to challenges for consumers in their economic and financial activities.
3. There are 658 financial literacy centres running throughout India to promote financial literacy.
4. SEBI launched a state wide effort to extend financial education to a variety of target categories, including students in schools and universities, working executives, homemakers, retired personnel, self-help groups, and so on.
5. Seminars on a variety of topics, including savings, investing, financial planning, banking, insurance, and retirement planning.
6. Essentials of Investing: A set of 11 pamphlets created to raise public understanding about investments.

Suggestions to Improve Financial Literacy

1. To increase knowledge of the benefits of basic banking services, it is recommended to organise initiatives at all levels, particularly in rural and backward areas.
2. The government should expand promotional programs such as "Jan Dhan Yojna" to reach women in rural and tribal areas, with the goal of providing basic banking services on a larger scale.
3. The government can form a team of women to assist women in areas where they are unable to access information. This will help them understand the importance of basic money management concepts and how they can benefit their own financial situation and their families.

4. If women truly want to enhance their financial literacy, they must seize the opportunity and make use of the accessible financial information. To gain greater financial knowledge, women must attend an increasing number of workshops, seminars, and financial management courses in their local area.
5. In rural areas, banks should communicate in vernacular, regional, or local languages to help women grasp information, as literacy rates among women are low.
6. The government should increase awareness of literacy programs for women, particularly in rural and underserved areas, to promote their empowerment and the prosperity of their families. Women are the foundation of any family.
7. Discuss basic finance and money issues with family members, especially female children, to help them understand the importance of financial literacy and empowerment from a young age.
8. Women must in still the habit of financial planning as soon as they begin earning money and be clear about their long-term financial goals so that they can use their earnings more effectively to secure their future and after retirement, thereby assisting them in achieving their financial goals.
9. Women must keep a financial diary in which they can record their weekly or monthly expenses and strive to restrict them or spend wisely in order to preserve regular savings, which will eventually help them and their families with uncertain future needs.

Conclusion

India is implementing initiatives to promote digital financial literacy, including the Digital India program launched in 2015. This includes knowledge and skills to manage financial affairs using digital tools and platforms, as well as digital security practices. The Reserve Bank of India (RBI) has developed finance-focused institutes, but India ranks 23rd out of 27 nations in financial literacy. The government has incorporated financial literacy into school and college curricula, held activities and competitions, and established 658 financial literacy centers. Financial literacy is crucial for women entrepreneurs, helping them make informed decisions, manage resources effectively, and achieve economic independence. However, women entrepreneurs face challenges such as limited access to financial education, difficulty accessing credit and funding, and limited awareness of government schemes and financial products. To improve financial literacy, the government should organize initiatives at all levels, particularly in rural and backward areas, expand promotional programs, form

a team of women to assist women in areas where they cannot access information, and encourage women to attend workshops, seminars, and financial management courses in their local areas.

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The Effectiveness of Financial Educational Programme on Retirement Planning Among Staff of Tara Government College (A), Sangareddy

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Abstract

The study examined the effectiveness of Financial Literacy Program on Retirement planning among the staff of the Tara Government College (A), Sangareddy. The study aims at determining the relationship between financial literacy and retirement planning, with a specific focus on gender, age and category (regular/temporary staff). A descriptive survey research design was explored to describe the behaviour of population. Entire population (staff) was considered for the study. Data collection was done, using Close-ended online Survey through Google Form. Percentage method invoked for all research questions. The program has given more knowledge and confidence about retirement plan to the participants. The factors such as Schedules and locations have made the program, more interesting. It was concluded that, there exists positive correlation between Financial Literacy Program and Retirement Planning. But the relationship is moderate.

Keywords: Financial Knowledge, Financial Decision, Confidence Level, Financial Education

Introduction

To secure consistent financial stability, at the post retirement life, every individual especially middle aged individual would strive for. According to McCune (1998), many future retirees lack of education in Retirement Planning. Financial Literacy would provide both expertise and competencies of Financial Management, including retirement planning. For the most of middle aged individuals, might have invested substantially and have a little surplus to explore new investment opportunities. Often Financial Education and Financial Literacy are used interchangeably. However, Financial Education is the process of acquiring knowledge, skills, and attitudes, whereas Financial Literacy, on the other hand, is the outcome of education. Financial Literacy involves application of acquired knowledge. Customised Financial Literacy training could guide an individual for all eventualities such as children education, taking care of elderly parents, meeting their own medical expenditure and also expend on daughters' marriage, etc. The persons

passing through their middle-aged period, would show concern for society, in addition to his own interest.

Several studies have shown positive correlation between Financial Literacy training and its impact on retirement planning. Lusardi and Mitchell (2011) compared the financial behavior before and after administering Financial Literacy training and found that post training, the trainees had remarkable inquisitiveness on retirement planning. In similar study, Collis and Lusardi (2019) had undertook randomized control experiment on savings behavior and found that participant had a significant change in retirement saving goals, on undergoing financial training.

In other words, setting Objectives, for Retirement planning means, to expect a minimum assured lifestyle, after having been met all financial commitments. As per Lusardi and Mitchell (2011), Retirement Planning covers a wide range of aspect such as healthcare expenditure, inflation and also life expectancy. It also encompasses lifestyle which an incumbent willing to

lead after retirement. Financial Literacy could be pivotal tool in boosting Retirement Planning and readiness. The persons possessing a satisfying level of Financial Literacy could evolve a better Retirement Planning and readiness, as he has both the information and skill, as commented by Lusardi and Mitchell (2014).

According to Munnell, Hou and Sanzenbacher (2018), individuals having employer-sponsored Retirement Planning, could garner more savings and comparatively be in a better position. According to Carstensen et al (1999), middle aged individuals would have well balanced emotional quotient in comparison with younger individual. Chen and Volpe (1998) opined that Financial Education could encourage people to participate more in Retirement Planning.

The present study attempts to examine the effectiveness of financial Literacy training for staff of Tara Government College (Autonomous), Sangareddy. The Training focused more on retirement planning of participants.

LITERATURE REVIEW

According to Garg and Singh (2018) Financial Literacy means “the ability to use knowledge and skills to manage financial resources effectively, for a lifetime of financial well-being”. According to Lusardi and Mitchell (2011) Individuals with higher financial literacy would tend to have higher confidence in handling Financial matters and avoid financial wrong decisions. In other words Financial literacy would enhance Financial Well-being.

Huston (2010) was of the opinion that Financial Literacy not only significant for individuals but also for households, as it can be helpful for both financial stability and resilience spheres.

Shahrabani (2013) found that level of Financial Literacy is determined by gender, nationality, class rank and work experience. Swamy MB and Priya R, (2017) had made research on MBA students in Andhra Pradesh and found that students of MBA of all streams i.e., Finance, Human Resource and marketing have low level of Financial Literacy. They also found that M.com students are far better in Financial Literacy Level, when compared to MBA students.

Chen H and Volpe RP (1998) conducted a survey on awareness on financial topics among the students. They found the awareness ‘below average’. They recommended for integrating of Financial curriculum for budding professionals.

Imel (1989) suggests that teaching adults require different approaches than teaching children and adolescents. Adult education should be humanistic and andragogical model, imparting the subjects, based on their past knowledge and experience.

Many studies have shown favourable impact of training of Financial Literacy in retirement planning. Lusardi and Mitchell (2011) found that the persons who participated in financial education programs, are been more good at retirement planning. The same was re-confirmed by them in 2014.

Munnell, Hou, and Sanzenbacher (2018) underscores the strong relationship between employer sponsored retirement scheme and employee’s savings.

Research Gap

Earlier researches on training programs with regard to Financial management, giving impetus only to saving and investment. However, few researches were done on assessing the effectiveness of training in retirement planning.

Significance of Study

1. Adds more to the existing body of knowledge
2. Financial Education programs can be carved out
3. Informed decision could be taken out
4. The study could be a path breaker for Policy makers
5. Establishes the link between Financial Literacy and Retirement planning empirically

Objectives of the Study

- 1) To examine the effectiveness of ‘Financial Literacy Training’ in relation to ‘Retirement Planning’ of staff of Government Degree College, Patancheru.
- 2) To determine the factors influencing participants of Tara Government College (Autonomous), Sanga Reddy staff in attending the ‘Financial Literacy Training’ on Retirement Planning.

Research Methodology

The study is a descriptive survey research design. Convenient sampling technique is used. Describing the population by observation, rather than influencing it. Entire population was chosen for the study.

Population And Sample: The study was carried by *considering entire population.*

TOTAL: 107 MALE: 56 FEMALE: 51

About Tara Government College (A), Sanga Reddy Dist. Telangana

It was established in 1977, having been growing by leaps and bounds, from humble 232 students to 3492 (2013). Offering 41 UG programs and 10 PG programs, and covering the area of 22 acres of land. The institution has been the seventh largest college with regard to student

strength in Telangana State. It attained Autonomous Status from the academic year 2016-17. As the college is the largest in the district of Sanga Reddy, and the employees come under Public Sector, the researcher has chosen the college for his study.

Instrument for Data collection

Self administered close ended online questionnaire is been incorporated in Google Form. Questionnaire was prepared after thorough review of literature and validated by pre-testing by experts. **Financial Literacy and Retirement Planning Behavior Scale (FLRPB)** was used in preparation of Questionnaire. Questionnaire consists of 4 sections. First section comprises of demographic details of respondents. Second to fourth sections have ---statements, mostly in likert scale. Each question has four suggestive answers i.e., strongly agree, Agree, Disagree, Strongly Disagree. Strongly Disagree, Disagree are considered as incorrect answers, carrying '0' mark for evaluation purpose. For the answers such as 'Strongly Agree', 'Agree'. '1' mark is awarded for evaluation purpose. The reliability of the Questionnaire is measured with the help of Cronbach Alpha and it is 0.89.

Data Analysis

Demographic profile of participants Table 1.1

Demographic	Options	Frequency (n)	Percentage (%)
Gender	Male	56	52
	Female	51	48
Age in years	Less than 40 years	33	31
	Greater than 40 years	74	69
Category	Regular	72	67
	temporary	35	33

Source: Tara Govt.College (A), Sangareddy

Table 1.1 elaborates all the three demographic profiles i.e., Gender, Age and cadre. As far as, gender is concerned, parity between both male and female are almost similar (52:48). On the other hand, age disparity between the staff is wide, as the staff above 40 years are significantly higher (67%). The staff composition is highly dominated by regular staff (67%). In a gist, male regular staff, crossing 40 years are more in the college.

Research Question no. 1

To examine the effectiveness of Financial Literacy Training program on Knowledge and understanding of retirement planning and preparedness, of Staff of Tara Government College (A), Sanga Reddy

Table No. 1.2

Statements	Strongly agree (Frequency)	Agree (Frequency)	Disagree (Frequency)	Strongly Disagree (Frequency)	Mean
By participating in the training program on Retirement Planning, I am able to gain knowledge	27 (25%)	54 (50%)	16 (15%)	10(10%)	2.897
I am more confident after attending the Training, with regard to taking Financial decisions	21 (20%)	43 (40%)	27 (25%)	16 (15%)	2.645
The training has boosted the my morale about the preparation for Retirement	37 (35%)	33 (30%)	21 (20%)	16 (15%)	2.85

Source: Field Survey

The Table 1.2 reveals a strong positive impact of Financial Literacy Training Program on Retirement Planning on the Staff of Tara Government College (A). 75% (25% + 50%) of respondents have agreed that the participation of the program, have significantly increased their knowledge on Retirement Planning. It is also been acknowledge by Mean value, as most of them are 'Agreeing'. 60% (20% + 40%) are of the opinion that training program has boosted their Financial Decision Skill. Mean value of the question, has confirmed the same, as it falls under 'Agree'. Overall preparedness of Retirement planning, was more after attending training program (65%) (30%+35%). The Mean value has supported the same, as it falls under the category of 'Agree'

Research Question No. 2

Determination of Factors, influencing the participation and engagement of the staff of Tara Government College (A)

Table No. 1.3

Statements	Strongly agree (Frequency)	Agree (Frequency)	Disagree (Frequency)	Strongly Disagree (Frequency)	Mean
The convenience of program schedules, significantly affects my decision to participate in Financial Literacy programs	22(20%)	48(45%)	21(20%)	16(15%)	2.71
Content and topics relevant to my Financial concerns, are making me to participate	27 (25%)	43 (40%)	21 (20%)	16 (15%)	2.757
Organization of program at more accessible location, would pull many participants	16 (15%)	54 (50%)	21 (20%)	16 (15%)	2.654

Source: field study

The Table No. 1.3 indicates that several key factors, those would influence the participation of staff of Tara Government College (A) in the Educational program. 'Time Schedules' significantly affect the participants to join in the program (65% agreement). The Mean is also revealing the same, as it comes under 'Agree'. The Content and topic of educational program could pull the crowd, is the opinion given by 65% participants. The Mean value of the survey question, is supporting the same, as it comes under 'Agree' domain. 65% of participants had expressed their agreement over the accessibility of location, could be a game changer for the success of the program. 'Agree' is the category under which the mean value of survey question falls.

Research Question no. 3

To assess the correlation between participation in Financial Literacy Program and the confidence levels with regard to ability to make Retirement Planning decisions

Table No. 1.4

Statement	Strongly Agree (Frequency)	Agree (Frequency)	Disagree (Frequency)	Strongly Disagree (Frequency)
My confidence levels with regard to retirement planning, have increased after attending the program	27 (25%)	48 (45%)	21 (20%)	11 (10%)

Source: Field survey

The table 1.4 reveals a strong correlation between attending the Financial Literacy program and the ability to make Retirement Planning Decisions. The same was confirmed by a significant majority of participants (70%). The Mean is also showing same, as it comes under 'Agree' category.

Findings

Smith and Johnson (2017) found that working adults' Financial Literacy has a modest positive relationship with Retirement Planning. The same was confirmed by Johnson and Smith (2018) in their another studies, pertaining to Meta Analysis on multiple studies on 'Financial Literacy and Retirement Planning'. Thompson, Lo & mitra (2019), have found low positive relationship between Financial Literacy and Retirement planning under their Systematic Review studies.

The findings of present study, are similar to the earlier studies done, as cited above. Knowledge acquisition had happened by undergoing Financial literacy training. Financial Decisions making is been done by participants with much ease. Time and location are been vital factors for enrollment. In a nutshell, there exists positive correlation between 'Financial Educational Program and Retirement Planning', but the magnitude is low.

Recommendatons/Suggestions of the Study

- 1) Integrating Financial Literacy programs into educational curricula
- 2) Financial Education must be imparted at the tender age itself. This could trigger Financial responsibility
- 3) Employer should undertake awareness campaign to promote Financial Literacy, among their Employees.

- 4) Scope of Financial Inclusion could be widened more by introducing 'online Platform', mobile App, Workshop and Seminar.
- 5) Gender specific programs to be designed, for more Financial inclusivity and effectiveness.

The research outcome will have implications for policy makers, educators and Financial Institutions in designing Financial Literacy Programs, for staff of Tara Government College (A).

Conclusion

Findings revealed a low positive relationship between Financial Literacy and Retirement Planning. Moderating effect of Gender on the relationship between Financial Literacy and Retirement Planning, is positively correlated. The study emphasized the need for Gender specific Financial Education. Consistent with previous studies by eminent researchers, there exists relationship between Financial Literacy and Retirement Planning, but it could be either moderate or low.

Scope for further studies

There is a scope of doing research on retention of post program effectiveness with passage of time.

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Impact of Green HRM Practices Among the Employees: An Evaluation

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Abstract

Researchers examine the effects of Green Human Resource Management (HRM) practices which incorporate environmental sustainability into HR functions aiming to minimize ecological damage while establishing sustainable workplaces. Green HRM applies eco-friendly methods across recruitment and training processes as well as performance management and employee engagement to minimize waste and support sustainable practices. The study explores employee awareness of Green HRM practices as well as how these practices affect job satisfaction and the difficulties encountered during their implementation. A multiple linear regression was conducted with 22 faculty members from colleges in Hyderabad, examining the effects of age, experience, paperless administration, Green HRM practices, sports/yoga/meditation, and implementation challenges on job satisfaction. Additionally, a chi-square test was performed to assess the association between mental health-focused Green HRM practices and the frequency of sports/yoga/meditation activities. The regression model, while not statistically significant, showed marginal significance for paperless administration and sports/yoga/meditation in increasing job satisfaction. The chi-square test shows a significant relationship between the type of mental health practice and its frequency.

Introduction

Green Human Resource Management (Green HRM) showcases a pioneering method for embedding environmental sustainability principles within human resource functions. Organizational objectives merge with environmental initiatives to diminish industrial ecological effects and develop sustainable work environments.

Definition: The term Green HRM describes the process of adopting environmentally sustainable methods within human resource management including green recruitment and training along with performance management and employee engagement. The approach focuses on decreasing energy usage and waste production while advancing sustainable organizational practices.

Literature Review

This study mainly focuses on the implementation of Green HRM In which 75% of experienced employees oppose in adopting Green HRM practices but at the same time 75% of employees are supported with specific SDG practices like quality education mental health green waste disposal Mahmood F.N.M (2025)

According to Sujata Das et al (2024). The top management is positive in implementation of Green HRM practices but not in the recruitment and selection process the results was based on the quantitative survey

The studies say about the higher education institutes implementing green HRM policies or practices to educate the students which contributes to SDG (Mahesh et al 2024)

This paper talks about the challenges in Green HRM that top management is in efficient in practice in the green

HRM the other way round this paper talks about NIT has green vehicles and lakes for playing and movement in the campus (Mukherjee MS Bhattacharya (2020)

This papers speaks about the green HRM practices which are implemented by the professors in the colleges like online attendance online mark sheet etc and it also talks about further enhance they self-actualization demand more important in any management (Bhagyalakshmi et al 2019)

The objective of study

To analyse the awareness of green HRM practices among the employees

To find out the job satisfaction among employees

To Examine the challenges among the employees

Ananalysis

Null Hypothesis

For Regression Analysis

Null Hypothesis (H0): The predictors (age, years of experience, frequency of paperless administration, type of Green HRM practice, frequency of sports/yoga/meditation, and challenges in implementing Green HRM) have no significant effect on the perceived impact of Green HRM practices on job satisfaction

Alternative Hypothesis (H1): At least one predictor has a significant effect on the perceived impact of Green HRM practices on job satisfaction (at least one $\beta_i \neq 0$).

Regression Analysis

A multiple linear regression was conducted to examine the effect of age, years of experience, frequency of paperless administration, type of Green HRM practice, frequency of sports/yoga/meditation, and challenges in implementing Green HRM on the perceived impact of Green HRM practices on job satisfaction (1 = Strongly Disagree, 5 = Strongly Agree). The sample consisted of 22 faculty members from colleges in Hyderabad. Results as shown below

Table No.1 Regression Analysis

Predictor	β Coefficient	Standard Error	t-value	p-value
Intercept	2.5	0.8	3.13	0.01
Age	0.2	0.25	0.8	0.43
Years of Experience	-0.15	0.2	-0.75	0.46
Paperless Administration Freq.	0.3	0.15	2	0.06

GHRM Practice Type	0.25	0.18	1.39	0.18
Sports/Yoga/Meditation Freq.	0.4	0.2	2	0.06
Challenges	-0.1	0.17	-0.59	0.56

Model Fit**: $R^2 = 0.35$, Adjusted $R^2 = 0.15$, $F(6,15) = 1.35$, $p = 0.30$.

The frequency of paperless administration ($\beta = 0.30$, $p = 0.06$) and sports/yoga/meditation activities ($\beta = 0.40$, $p = 0.06$) were marginally significant predictors, suggesting that more frequent engagement in these practices slightly increases perceived job satisfaction. Other predictors were non-significant, and the overall model was not significant ($p = 0.30$), likely due to the small sample size ($n = 22$).

Chi-Square Test

For Chi-Square Test:

H0: There is no association between the type of Green HRM practice for mental health (Sports, Yoga, Meditation) and the frequency of sports/yoga/meditation activities (Monthly, Weekly).

H1: There is an association between the type of Green HRM practice for mental health and the frequency of sports/yoga/meditation activities

A chi-square test of independence was performed to assess the association between the type of Green HRM practice for mental health (Sports, Yoga, Meditation) and the frequency of sports/yoga/meditation activities (Monthly, Weekly) among 22 faculty members.

Table No. 2 Contingency Table: chi-square test

Frequency	Sports	Yoga	Meditation	Total
Monthly	14	4	1	19
Weekly	1	0	2	3
Total	15	4	3	22

Results:

- **Chi-square statistic**: $\chi^2(2) = 6.39$

- **p-value**: 0.04

- **Expected frequencies**:

- Monthly: Sports (12.95), Yoga (3.45), Meditation (2.59)

- Weekly: Sports (2.05), Yoga (0.55), Meditation (0.41)

A significant association was found ($\chi^2(2) = 6.39$, $p = 0.04$), with meditation more likely to be weekly and sports predominantly monthly. Small expected frequencies in some cells (<5) suggest cautious interpretation.

Finding

The chi-square test alongside the literature review reveals promising paths for Green HRM adoption among employees despite the regression analysis showing restricted statistical significance. Practices will gain employee acceptance when they match personal preferences alongside organizational values while providing clear benefits that enhance job satisfaction and workplace well-being. Organizations increase acceptance by customizing their initiatives and cultivating a green psychological environment alongside effective benefit communication.

Conclusion

The study indicates that there is a possibility for green HRM practices to be implemented which positively influence employee's job satisfaction and the success aligning with individual performance and organisation values

Futher Study

The further research should expand to other cities and sample size need to be extended. the investigate on long term basis

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A Study on the Behavioural Finance Perspective of Investor Awareness and Decision-Making in Gold and Stock Markets

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Abstract

In this era, market awareness, financial literacy, and behavioural biases increasingly influence modern investment decisions. Gold has traditionally been viewed as a safe and a hedge against inflation, attracting risk-averse investors during times of economic uncertainty. The stock market investment offers opportunities for higher returns but involves greater volatility, but it offers the potential for greater returns, attracting investors with higher risk tolerance and long-term growth. The significance of portfolio diversity as utilizing gold and stock investing is a prevalent approach for risk management and profit maximization. The objective of the paper is to analyze the impact of investor awareness on decision-making in gold and stock market investments, to evaluate the role of behavioural biases while investing, and to compare risk perception on investment decisions with gold and stocks. This study is based on primary data collection, the analysis employs quantitative methods to evaluate the relations between behavioural biases and investment decisions in gold and stock investment.

This study emphasizes the importance of investor knowledge in decision-making in the gold and stock markets as it indicates that investors with higher financial literacy and market awareness are more likely to be enlightened with profit and balanced investments. Ultimately, this research highlights the significance that investors understand is to be making wise choices in the stock and gold markets. However, behavioural biases can be lessened with increased financial awareness.

Keywords: Financial Literacy, Inflation, Economics, Portfolio.

Introduction

Investment decisions have grown more complicated in the modern period, requiring a greater comprehension of financial markets. The stock and gold markets are two popular investing options with a range of risks and opportunities. Exploring these possibilities requires investor expertise since it improves in evaluating market trends, possible returns, and related risks. One of the most important factors in enabling people to make wise investing decisions is financial literacy. Investor education is more important than ever because of the expansion of investing alternatives brought about by digital platforms. This study investigates the significance of awareness and decision-making in gold and stock market investments.

The young generation's interest in financial investment is expanding significantly, which is evidence of a

greater understanding of the proper way to manage money wisely. According to the survey, the percentage of investors under 30 has increased dramatically in recent years, rising from 22.9% in March 2018 to an astonishing 40.0% by September 2024. This trend needs to be associated with thoughtful and informed decision-making, especially when it comes to stock and gold investments.

In today's financial environment, financial literacy is essential since it enables people to recognize and remain aware of scams. It reduces the chance of being a victim of fraud by assisting investors in making well-informed choices. Financial education ensures improved protection and safe money management considering the rise in investment and cyber-crimes, Modern investors must concentrate on striking a balance between risks and profits this guarantees steady and strategic growth.

Objective

To examine the level of awareness in gold and stock market while investing across various investors.

To examine the impact of diversification on portfolio management in gold and stock investment.

1. To analyze the risk perception included in investment decisions with gold and the stock market.
2. To examine the role of financial literacy in improving decision-making among gold and stock investors.

Literature Review

1. The Psychological Dynamics of Gold Investment: An Analysis of Investor Behaviour within the Gold Market of Bengaluru (2023) - The study illustrates the way behavioural aspects and demographic variables have a big impact on gold investment choices. It highlights the significance that it is to utilize a balanced approach to investing, taking into consideration prior investment trends, experience, risk tolerance, and emotional considerations. Higher returns are typically attained by investors with substantial market expertise. This emphasizes knowledge of investment to optimize profits from gold investments, well-informed decision-making, market expertise, and strategic planning are essential.
2. The impact of Financial Literacy and Behavioural Bias on Investment Decision-making (2021) - The study influences behavioural biases and financial literacy on investment decision-making. Financial literacy among investors includes making wise investment choices and avoiding behavioural biases in decision-making, which are influenced by heuristic bias - intellectual illusions. The study investigates behavioural biases and financial literacy interact to influence investment choices. The findings demonstrated a strong positive correlation between the development of behavioural bias in decision-making. An investor's financial literacy has a big influence on their stock market investing choices.

Scope of the Study

The study analyses that awareness among investors and decision-making in the stock and gold markets are influenced by behavioural finance properties. The purpose of the study is to find trends in the behaviours of stock and gold investors. It emphasizes the significance of financial literacy while making investments.

Limitation of the Study

During the study, Investor behaviour is influenced by a limited number of parameters, and the study may be restricted to a certain demographic. Emphasizing solely

the gold and stock markets might overlook trends related to other popular investments, and the significance or the accuracy may be impacted by the rapid shifts in the market and economy over the study time.

Research Methodology

The research aims to assess "A Study on the Behavioural Finance Perspective of Investor Awareness and Decision-Making in Gold and Stock Markets." To evaluate the extent of investment perspective in gold and the stock market around the Chikkmagaluru region, the present circumstance is being examined by gathering the opinions of locals and students. A closed-ended questionnaire is used to get the opinions of the individuals.

Data Collection

The primary data was collected using a questionnaire with 10 well-written questions. A sample of 110 respondents was selected for the research. A realistic sampling technique was used in the study to effectively collect data from the chosen participants. Cross-tabulation and Chi-Square analysis were used in the study.

Testing of Data Using Chi-Square Hypothesis Test

Reliability Statistics

Cronbach's Alpha	N of Items
.791	7

The Cronbach's Alpha reliability test was conducted on the data collected from primary sources of the questionnaire, which has produced a value of 0.791 indicating excellent internal consistency and demonstrating the instrument's high reliability for measuring the intended construct. Good dependability implies that the survey's questions accurately reflect respondents' knowledge and opinions about the investment perspective of investors in investing and decision-making regarding gold and stock.

1. Analyzing the Association Between the Age Factor and investment in stock market and gold

q1 * Have you ever invested in gold and stock market Crosstabulation

Count		Have you ever invested in gold and stock market				Total
		No (fixed deposit, real estate)	No investment	Yes invested in gold	Yes invested in stock market	
q1	18-24	6	3	0	9	27
	25-34	0	0	3	18	51
	35-44	9	0	3	0	18
	45 and above	3	3	6	0	15
Total		18	6	12	27	111

	Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)	Point Probability
Pearson Chi-Square	66.666 ^a	12	< .001	b		
Likelihood Ratio	77.225	12	< .001	b		
Fisher-Freeman-Halton Exact Test	b			b		
Linear-by-Linear Association	7.076 ^c	1	.008	.008	.005	.001
N of Valid Cases	111					

a. 12 cells (60.0%) have expected count less than 5. The minimum expected count is .61.
 b. Cannot be computed because there is insufficient memory.
 c. The standardized statistic is -2.660.

we have assumed the Null Hypothesis (H_0) as there is no significant association between age groups and the type of investment in gold and stock markets and the alternative Hypothesis (H_1) as there is a significant association between age groups and the kind of investment in gold and stock markets. During the study, the Chi-Square Value is 66.606, the Degrees of Freedom (df) is 12 and the p-value is < 0.001 . Since, the p-value is less than the significance level (0.05), we failed to accept the null hypothesis (H_0) and accepted the alternative hypothesis (H_1). There is a significant association between age groups and the type of investment as it indicates that investment preferences vary significantly across different age groups.

2. Analysis of the Association Between Financial Literacy Programs and Factors of Investment Decision

Have you attended any financial literacy programs related to investments? * Which financial literacy topic has influenced your investment decisions the most? Crosstabulation

Count		Which financial literacy topic has influenced your investment decisions the most?			Total
		All of the above	Portfolio diversification	Risk assessment and Tax implication	
Have you attended any financial literacy programs related to investments?	no	3	0	3	6
	regularly	0	12	15	27
	Yes frequently	9	3	6	18
	Yes occasionally	24	15	21	60
Total		36	30	45	111

Chi-Square Tests						
	Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)	Point Probability
Pearson Chi-Square	19.877 ^a	6	.003	.002		
Likelihood Ratio	29.243	6	<.001	<.001		
Fisher-Freeman-Halton Exact Test	24.413		<.001	<.001		
Linear-by-Linear Association	4.970 ^b	1	.026	.027	.014	.004
N of Valid Cases	111					

a. 4 cells (33.3%) have expected count less than 5. The minimum expected count is 1.62.
b. The standardized statistic is -2.229.

We have assumed the Null Hypothesis (H_0) as there is no significant association between attending financial literacy programs related to investments and the financial literacy topic influencing investment decisions. Alternative Hypothesis (H_1) as there is a significant association between attending financial literacy programs related to investments and the financial literacy topic influencing investment decisions. During the study, the Chi-Square Value is 19.877, the degree of Freedom is 6 and the p-value is 0.003.

Hence, the p-value (0.003) is less than the significance level (0.05). we failed to accept the null hypothesis (H_0) and accepted the alternative hypothesis (H_1). There is a significant association in this analysis that implies that exposure to financial literacy programs impacts individuals' focus on specific financial topics such as portfolio diversification or risk assessment and tax implications.

3. Analysing the association between factors to invest in gold and different forms of gold investment

Which of the following forms of gold investment have you considered? * Which factor most influences your decision to invest in gold or stocks? Crosstabulation

Count		Which factor most influences your decision to invest in gold or stocks?					Total
		Level of risk	market trends	Personal preference	Potential return	recommendation from others	
Which of the following forms of gold investment have you considered?	Gold exchange traded	6	0	0	21	0	27
	Gold Mutual fund	3	0	3	0	0	6
	Physical gold (e.g. coins, bars)	9	3	3	15	3	33
	Sovereign gold Bond certificate	6	3	0	33	3	45
Total		24	6	6	69	6	111

Chi-Square Tests						
	Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)	Point Probability
Pearson Chi-Square	43.617 ^a	12	<.001	<.001		
Likelihood Ratio	39.889	12	<.001	<.001		
Fisher-Freeman-Halton Exact Test	31.182		<.001	<.001		
Linear-by-Linear Association	.911 ^b	1	.340	.346	.178	.015
N of Valid Cases	111					

a. 14 cells (70.0%) have expected count less than 5. The minimum expected count is .32.
b. The standardized statistic is .954.

We have assumed the H_0 (Null Hypothesis) as there is no association between the form of gold investment considered and the factor that most influence the decision to invest in gold or stocks and H_1 (Alternative Hypothesis) as there is an association between the form of gold investment considered and the factor that most influences the decision to invest in gold or stocks. During the study Pearson Chi-Square: 43.617, Degree of Freedom:12 and P-value: $<.001$. during the study, The P-value is less than the significance level (0.05), hence we failed to accept the null hypothesis (H_0) and accepted the alternative hypothesis (H_1). There is a statistically significant association between the form of gold investment considered and the factor that most influences the decision to invest in gold or stocks.

4. Analysing the association between factors to invest in stock market and different forms of stock market investment

Which of the following forms of stock market investment have you considered? * Which of the following factors do you consider most important when diversifying your portfolio? Crosstabulation

Count		Which of the following factors do you consider most important when diversifying your portfolio?					Total
		Asset correlation/correlation of wealth	economic condition	Market/ing return	Risk management		
Which of the following forms of stock market investment have you considered?	Derivatives - option and Future	0	0	3	0	3	3
	Direct stock purchase - equity and preference stock	0	0	3	36	12	51
	Exchange traded funds - stock and commodity ETF	0	3	0	6	0	9
	Mutual fund - equity and debt Mutual fund	3	21	3	12	9	48
Total		3	24	9	54	21	111

Chi-Square Tests						
	Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)	Point Probability
Pearson Chi-Square	75.012 ^a	12	<.001	^b		
Likelihood Ratio	68.492	12	<.001	<.001		
Fisher-Freeman-Halton Exact Test	57.890		<.001	<.001		
Linear-by-Linear Association	19.747 ^c	1	<.001	<.001	<.001	.000
N of Valid Cases	111					

a. 14 cells (70.0%) have expected count less than 5. The minimum expected count is .08.
b. cannot be computed because there is insufficient memory.
c. The standardized statistic is -4.444.

We have assumed the Null Hypothesis (H_0) as there is no association between the forms of stock market investment considered and the factors considered most important when diversifying a portfolio and the Alternative Hypothesis (H_1) as there is a statistically significant association between the forms of stock market investment considered and the factors considered most important when diversifying a portfolio. During the study, the Chi-Square Value is 75.01, the Degree of Freedom (df) is 12 and the P-value is < 0.001 . Hence, we failed to accept the null hypothesis (H_0) and accepted the alternative hypothesis (H_1). It indicates the statistically significant association between the forms of stock market investment considered and the factors considered most important when diversifying a portfolio.

3. Analysis of Investment Patterns and Financial Literacy Knowledge in Gold and Stock Market Investments

Have you ever invested in gold and stock market? How would you rate your knowledge of financial literacy related to gold and stock market investments? Crosstabulation

Count	Have you ever invested in gold and stock market	How would you rate your knowledge of financial literacy related to gold and stock market investments?			Total
		High	Moderate	Very high	
	No (fixed deposit, real estate)	3	15	0	18
	No investment	0	6	0	6
	Yes invested in gold	9	0	3	12
	Yes invested in stock market	15	9	3	27
	Yes, invested in both gold and stock market	27	6	15	48
	Total	54	36	21	111

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)	Point Probability
Pearson Chi-Square	51.358 ^a	8	< .001	< .001		
Likelihood Ratio	57.596	8	< .001	< .001		
Fisher-Freeman-Halton Exact Test	47.718		< .001	< .001		
Linear-by-Linear Association	.248 ^b	1	.618	.645	.323	.029
N of Valid Cases	111					

a. 6 cells (40.0%) have expected count less than 5. The minimum expected count is 1.14.
b. The standardized statistic is -.498.

We assumed that Null Hypothesis (H_0) as there is no association between the level of financial literacy related to gold and stock market investments and the investment experience and Alternative Hypothesis (H_1) as there is a statistically significant association between the level of financial literacy related to gold and stock market investments and the investment experience. During the study, the Chi-Square Value is 51.358, the Degree of Freedom (df) is 8 and the P-value is < 0.001. Hence, we failed to accept the null hypothesis (H_0) and accepted the alternative hypothesis (H_1). Hence, there is a statistically significant association between the level of financial literacy related to gold and stock market investments and the investment experience of individuals.

Analysing and Interpretation of Data with Data Visualisation

1 Representation of Investment Patterns of investors in Stock and Gold Markets

The study conveys the investment preferences of respondents in gold, stock markets are combined options. A significant percentage of respondents prefer investing in both gold and stock markets, followed by stock market and gold investments alone. The most preferred decision among respondents is diversified investments, which indicates a balanced approach to risk and returns. These varied investment methods might be influenced by financial education.

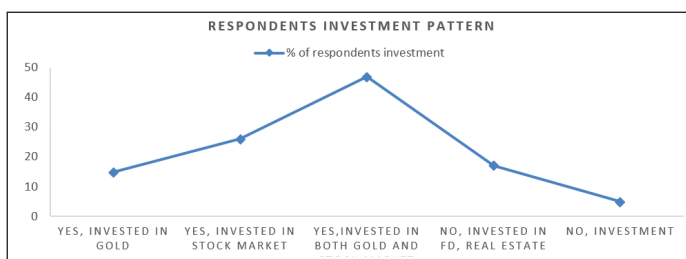


Figure i Chart representation of Investment Patterns of investors in Stock and Gold Markets

1. Representation of the key factor influencing to invest in Stock market and Gold

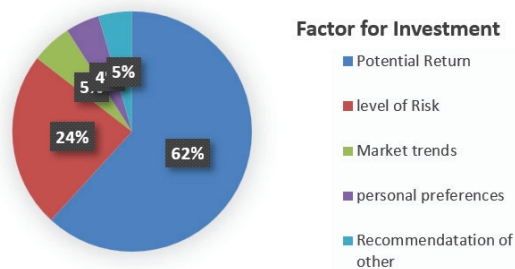


Figure ii Chart representation of the key factor influencing to invest in Stock market and Gold

The study highlights the main components affecting gold and stock investment Potential profits are the top consideration for most respondents (62%) while risk level is considered by 24%. trends in the market and distinctive preferences. Investors are largely return-focused, as evidenced by the fact that potential returns are the main motivator behind investment decisions. Investment decisions may be more balanced if financial education regarding risk management and market movements is strengthened.

This analysis represents that the financial education sources are most popular for stock market and gold for investing. Financial advisors are the subsequent most popular alternative, after online courses and resources. Friends, family, and social media. The popularity of online resources suggests that structured and trustworthy financial education is growing more popular. This preference emphasizes the necessity of trustworthy online resources and knowledgeable advice to improve financial expertise.

2. Representing the preferred source of financial education for Gold and Stock market investment.

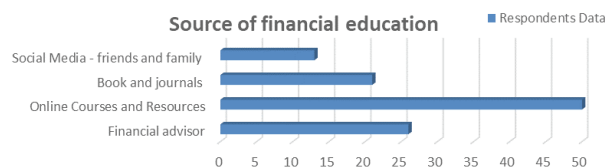


Figure iii Chart Representing the preferred source of financial education for Gold and Stock market investment

Finding of the Study

1. The study conveys that the respondent's age range of 25 to 34 for the majority of investing activities, indicating their strategic approach to wealth building in their early career phases. Because they have longer investment horizons, younger investors are more likely to take risks, which is consistent with behavioural finance trends.

2. During the study, a considerable number of participants have made investments in both the gold and stock markets, suggesting a greater understanding of diversification as a risk management technique when making decisions.
3. The study reveals that potential returns, which reflect an investor's profit-driven mindset, are the most important consideration when making investment decisions. This is consistent with behavioural finance theories, which hold that respondents should give priority to quantifiable financial results.
4. The study says that the most popular sources are online courses and resources, indicating a trend in the industry toward self-directed learning and digital literacy in investment decision-making.
5. According to the survey, 40.5% of respondents said that physical gold as coins or bars was the most popular way to invest in gold. This implies a predilection for tangible gold assets.
6. In the study, diversifying a portfolio, risk management were identified as the most crucial elements, indicating an emphasis on risk mitigation and economic fluctuation adaptation.
7. According to the Survey indicates that direct stock purchases and index funds are the most popular ways to invest in the stock market, with 43.2% and 45.9% of respondents, respectively. This suggests that direct stock ownership and market investing are preferred.
8. The study reveals that a significant number of respondents (57.1%) reported having participated in investment-related financial literacy programs, suggesting that these programs may have a beneficial influence on investing choices. And for long-term investments, a significant portion (48.6%) believe the gold market is less dangerous than the stock market, indicating a preference for gold as a supposedly safer investment alternative.
9. The study conveys that financial literacy subjects that had the biggest impact on investing decisions were risk diversification and portfolio management, underscoring the need of comprehending risk and portfolio creation techniques.

Suggestion from the Study

1. The study suggests encouraging digital financial literacy by offering tools and online courses to cater to the growing need for self-directed learning. These initiatives can help individuals make well-informed financial decisions. Awareness programs should target all age groups, as they are actively engaged

investors and need to be vigilant about investmental scams.

2. The study emphasizes educating investors about the benefits of diversifying their investments across gold and stock markets. This approach helps reduce risk, generate balanced returns, counter profit-driven thinking, and boost decision-making confidence.
3. The study highlights the importance of promoting balanced evaluations of investment opportunities as an approach can help identify and eliminate common biases, such as risk aversion and excessive reliance on recommendations. An enhanced approach of financial literacy initiatives can significantly boost investor confidence and encourage well-informed decisions in the stock and gold markets. To meet the growing demand for user-friendly, technologically advanced financial products, the study recommends creating easily accessible digital platforms for investments and education.

To promote a fair and balanced approach to gold and stock market investments, awareness programs about ethical investing and improved financial literacy should focus on the psychological aspects influencing investment decisions. By strengthening their decision-making, minimizing risk, and facilitating more sustainable and knowledgeable financial decisions, this empowers individual investors.

Conclusion for the Study

The study highlights key behavioural finance perspectives on investor awareness and decision-making in the gold and stock markets. Its significantly insights concerning investor awareness and decision-making in the stock and gold markets are highlighted in the study by behavioural finance. There is a need for more education on investment ideals, as most investors have a moderate degree of financial literacy. Although gold's stability makes it seem like a safer investment, there is a chance to inform investors about the advantages of diversification to successfully balance risk and return. Many respondents reported that financial literacy programs had a beneficial impact on them, highlighting its importance in helping people make accurate investment decision. Risk management with maximizing the return have revealed to be important components of portfolio diversification, demonstrating the vital approach that investors take to protecting their investments.

Moreover, the growing shift toward digital platforms highlights the need for user-friendly, tech-driven solutions that support learning and investment activities. The combination of education, digital accessibility, and tailored awareness initiatives, investors can be

empowered to make rational, well-informed choices. The outcomes exhibit that effective education can help people make better decisions and manage their portfolios. This study underscores the significance of aligning financial literacy with behavioural insights to foster confidence and efficiency in investment decisions across gold and stock markets.

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Harnessing AI and IoT for Inclusive Growth in Women Entrepreneurship in India

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Abstract

Artificial intelligence (AI) and the Internet of Things (IoT) are transforming industries worldwide, including entrepreneurship, by offering innovative solutions and enhancing decision-making processes. This paper explores the integration of AI and IoT in women entrepreneurship, focusing on their transformative potential in overcoming traditional barriers such as limited access to resources, socio-cultural constraints, and inadequate training opportunities. Using a mixed-method approach, this study highlights the role of AI and IoT tools in fostering inclusivity and scaling women-led enterprises in India. Key areas of investigation include AI-driven financial solutions, IoT-enabled smart inventory management, e-commerce, personalized training platforms, and policy recommendations for leveraging technology. By synthesizing global and national perspectives, this paper provides a roadmap for sustainable growth in women entrepreneurship empowered by AI and IoT.

Keywords: Women Entrepreneurs, Artificial Intelligence, Internet of Things, Socio-economic Growth, AI-driven Solutions, Digital Empowerment, India, Inclusive Innovation

1. Introduction

Artificial intelligence (AI) and the Internet of Things (IoT) are revolutionizing entrepreneurship by enabling data-driven insights, automating operations, and expanding market access. For women entrepreneurs, these technologies present unique opportunities to overcome traditional challenges such as gender bias, limited financial access, and socio-cultural constraints. In India, where women entrepreneurs account for a growing share of the economy, the integration of AI and IoT can redefine their business landscape.

This paper delves into how AI technologies—ranging from machine learning algorithms to natural language processing—and IoT-enabled devices are reshaping women entrepreneurship. By analyzing the Indian

context alongside global practices, it underscores the importance of a supportive ecosystem comprising government policies, private sector innovations, and community-based initiatives. The research also highlights emerging AI and IoT applications in training, financing, and market analytics.

2. Literature Review

2.1 Global Perspectives

The application of AI and IoT in entrepreneurship has gained traction globally. Studies from the United States and Europe illustrate how AI-driven platforms are helping entrepreneurs streamline operations and reach new markets. For instance, machine learning tools in Finland assist in predicting market trends, while AI-

driven analytics in South Africa enable targeted customer engagement. Similarly, Brazil's use of AI in microfinance showcases its potential to mitigate credit risk and expand financial inclusion. IoT is particularly prominent in supply chain optimization, with real-time tracking and smart logistics enhancing business efficiencies.

2.2 Indian Context

India's entrepreneurial ecosystem is witnessing a surge in AI and IoT adoption, particularly in fintech, e-commerce, agriculture, and healthcare sectors. Government initiatives like Digital India and Startup India have accelerated this trend. AI-powered platforms, such as chatbot-based customer support and predictive analytics, are providing women entrepreneurs with cost-effective tools to manage and scale their businesses. Moreover, AI-based financial products tailored to women's needs, such as microcredit algorithms, are addressing systemic barriers to credit access. IoT technologies, such as smart sensors in agriculture and retail, have improved operational efficiency and market access for women entrepreneurs.

3. Methodology

This study employs a mixed-method approach, combining qualitative and quantitative data from case studies, surveys, and secondary sources. Key data sources include government reports, AI and IoT research publications, and entrepreneurial case studies in India. AI and IoT applications in training, financing, and operational scaling are evaluated to identify best practices and challenges. Real-time datasets from AI-powered entrepreneurial platforms and IoT applications were also analyzed to provide practical insights into the effectiveness of these technologies.

Table 1: Key AI and IoT Applications in Women Entrepreneurship

AI/IoT Application	Description
Financial Analytics	Predictive tools for better financial decision-making.
Digital Marketing	AI-driven customer targeting and engagement tools.
Personalized Training	Adaptive learning platforms for skill development.
Credit Risk Assessment	Machine learning models for microfinance access.
E-commerce Integration	Automated inventory and sales tracking solutions.
AI Chatbots	Automated customer support to streamline operations.
IoT Inventory Management	Real-time tracking and predictive analytics for supply chains.
IoT Sensors for Agriculture	Smart devices for crop health monitoring and irrigation.

4. Discussion

4.1 Challenges Faced by Women Entrepreneurs

Despite the potential of AI and IoT, women entrepreneurs face challenges in accessing and adopting these technologies. Key barriers include:

- **Digital Literacy:** Limited awareness of AI and IoT tools among women entrepreneurs, particularly in rural areas.
- **Cost Barriers:** High initial costs of implementing AI and IoT solutions, making them inaccessible to many small and medium-sized enterprises (SMEs).
- **Data Privacy Concerns:** Issues around data security and ownership, especially with the widespread use of IoT devices.
- **Skill Gaps:** Lack of AI and IoT-specific training and expertise.

Table 2: Challenges in AI and IoT Adoption

Challenge	Description
Digital Literacy	Limited awareness of AI and IoT tools among women entrepreneurs.
Cost Barriers	High costs of implementing AI and IoT solutions.
Data Privacy Concerns	Issues around data security and ownership.
Skill Gaps	Lack of AI/IoT-specific training and expertise.

4.2 Opportunities and Success Factors

AI and IoT provide significant opportunities for women entrepreneurs:

- **Personalized Training Platforms:** AI-driven adaptive learning platforms offer tailored skill development, helping women entrepreneurs upskill in areas such as digital marketing, data analysis, and AI/IoT technologies.
- **E-commerce Growth:** AI-powered solutions, such as smart inventory management and AI-driven marketing tools, allow women-led businesses to efficiently reach broader audiences and improve customer engagement.
- **Operational Efficiency with IoT:** IoT-based tools, like smart sensors in agriculture and retail, help women entrepreneurs streamline operations, reduce waste, and enhance profitability.
- **Improved Financial Access:** AI-powered credit risk models and IoT-enabled data collection enhance microfinance access, enabling women entrepreneurs to secure loans more easily.

The success of these initiatives hinges on targeted government policies and private sector collaboration.

4.3 AI and IoT in Action: Case Studies

1. **IoT-Enabled Smart Agriculture for Women Entrepreneurs** A startup provides IoT-based sensors that monitor soil moisture, temperature, and crop health in rural India. These sensors send real-time data to a mobile application powered by AI, which analyzes the data and provides actionable insights

on irrigation, fertilization, and pest control. Women farmers using these tools have reported increased crop yields by 40% and reduced water usage by 30%. This synergy of AI and IoT enables women to make informed decisions that boost productivity and profitability.

2. **AI and IoT in Supply Chain Management for Small Retailers** Women entrepreneurs running small retail businesses in urban areas have adopted IoT-driven smart inventory management systems. These systems use IoT sensors to track stock levels, monitor product movement, and send data to AI systems that forecast demand and suggest replenishment schedules. A case study from a women-led grocery store chain in Mumbai shows a 25% reduction in stock-outs and a 20% reduction in waste due to the AI's predictive analytics combined with IoT's real-time data.
3. **AI-Powered Smart Healthcare for Women Entrepreneurs in Healthcare** A women-led healthcare startup in Bangalore integrates IoT devices with AI analytics to offer remote health monitoring services. The startup uses wearable IoT devices that track vital signs such as heart rate, blood pressure, and oxygen levels. The data collected is sent to an AI system, which predicts potential health issues and alerts both the patients and healthcare providers. This innovation has helped women entrepreneurs in healthcare expand their reach to rural and underserved areas.

4.4 Real-Time Application

To enhance the relevance of this study, real-time datasets from AI-powered entrepreneurial platforms and IoT applications were analyzed. Examples include:

- Loan approval rates for women entrepreneurs using AI-based credit scoring models in India. The analysis showed a 35% increase in successful loan approvals compared to traditional methods.
- Performance metrics of women-led businesses using AI for digital marketing. AI-optimized campaigns resulted in a 60% improvement in customer acquisition rates.
- Adoption rates of IoT-driven inventory management tools in small retail businesses. Women entrepreneurs reported a 25% reduction in operational costs after six months of implementation.

5. Policy Recommendations

To leverage AI and IoT for women entrepreneurship, the following measures are recommended:

1. **AI & IoT Integration Programs:** Develop initiatives that integrate IoT with AI for women entrepreneurs, especially in agriculture, healthcare, and retail sectors.
2. **Affordable AI and IoT Tools:** Promote subsidized AI and IoT solutions tailored to small and medium enterprises.
3. **Inclusive Policy Frameworks:** Ensure government schemes prioritize AI and IoT integration in women-led businesses.
4. **Public-Private Partnerships:** Encourage collaborations to develop sector-specific AI and IoT applications.
5. **Data Accessibility:** Facilitate open data platforms to enable women entrepreneurs to harness AI and IoT insights.

6. Future Directions

Future research should explore the convergence of AI and IoT in women entrepreneurship, focusing on how these technologies can jointly optimize operations in diverse sectors. Special attention should be given to the potential of IoT in enhancing data collection and real-time decision-making, which when combined with AI, can significantly improve business performance. Research into scalable IoT solutions for SMEs could also play a pivotal role in enabling women entrepreneurs to thrive in increasingly competitive markets.

7. Conclusion

AI and IoT are game-changers for women entrepreneurship, particularly in emerging economies like India. By addressing adoption barriers and enhancing accessibility, these technologies can unlock unprecedented opportunities for women entrepreneurs. Policymakers, industry leaders, and educators must collaborate to ensure the equitable integration of AI and IoT in entrepreneurship, fostering sustainable growth and inclusivity.

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Strategic Decision-Making in Economic Empowerment of Women in India: A Study

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Abstract

This study examines the dynamics of strategic decision-making in the economic empowerment of women in India, focusing on key determinants such as financial literacy, educational background, and access to financial institutions. This study involved quantitative analysis of 500 respondents and qualitative insights from focus group discussions revealed significant correlations between financial literacy and decision-making capabilities ($r=0.72$, $p<0.001$). The study found that 65% of women improved their financial outcomes after participating in literacy programs. While 42% of respondents benefited from digital financial services, traditional barriers persist, particularly in rural areas where 58% face limited access to banking. Key predictors of empowerment include educational background ($\beta=0.68$), family support systems ($\beta=0.54$), and financial institution access ($\beta=0.49$). Women with higher education levels were 2.5 times more likely to engage in household financial decisions and three times more likely to pursue entrepreneurship. Targeted mobile-based financial education programs improved decision-making confidence by 45%, while self-help group participation increased independent economic activity by 38%. These findings underscore the importance of integrated approaches combining financial literacy, digital inclusion, and social support to enhance women's empowerment. The study concludes by proposing a framework to address socio-economic barriers through customized programs, digital tools, and institutional support.

Keywords: Women's Economic Empowerment, Financial Decision-Making, Financial Literacy, Digital Financial Services, Gender Equality

Introduction

Women's economic empowerment is fundamental to achieving gender equality and sustainable economic growth in India. Despite making up nearly half of the population, women's participation in the formal economy remains significantly lower than men's, with only 19.2% of women participating in the labor force as of 2021. Strategic decision-making capabilities play a crucial role in enabling women to take control of their economic lives, from managing household finances to pursuing entrepreneurial ventures. This study examines the factors influencing women's economic decision-making in India and proposes strategies for enhancing their economic empowerment.

Review of Literature

Ramya, H. P., & Deepak, R. (2024): This study discusses strategies and initiatives to empower women, focusing on enhancing their financial well-being and economic independence. The authors highlight the importance of financial literacy programs and policy-level changes in bridging gender gaps and fostering sustainable economic empowerment.

Cheek, J. Z., & Corbett, P. E. (2024): This research examines the role of women's self-help groups (SHGs) in public decision-making processes in West Bengal, India. The findings reveal that SHGs not only enhance women's participation in economic activities but also strengthen their decision-making roles in public and household domains.

Ghosh, S., Mahapatra, M. S., Tandon, N., & Tandon, D. (2024): The authors analyze the contribution of SHGs in achieving sustainable development goals (SDGs) of women empowerment in India. The study identifies that SHGs serve as effective mechanisms for skill enhancement, financial literacy, and socio-economic mobility among women.

Bordoloi, A., Goswami, P., & Mahanta, L. B.: This study employs an ordered logit model to analyze the factors determining women's empowerment in rural areas. Key determinants such as education, financial inclusion, and institutional support systems were found to significantly influence empowerment levels.

Karunarathne Rasika, R. A., & Praveena, D.: The authors emphasize the pivotal role of SHGs in empowering women in India. Their study demonstrates that SHGs serve as a platform for women to gain financial independence, build social networks, and access credit facilities, which collectively contribute to economic empowerment.

Wani, N. U. H., Majidi, B. S., Sidana, N., & Goel, R. (2024): This study explores the multi-dimensional role of SHGs in Afghanistan, with implications for India. The findings reveal that SHGs enable women to achieve both economic and social empowerment, fostering sustainable development through skill-building and financial autonomy.

Reserve Bank of India (2022): The Financial Inclusion Reports by RBI provide insights into the progress of financial inclusion in India. They emphasize the importance of accessible banking services, digital financial platforms, and microfinance programs in reducing gender disparities in economic participation.

Ministry of Statistics and Programme Implementation (2021): The Periodic Labour Force Survey highlights the low participation of women in the labor force and underscores the need for targeted interventions to improve their economic engagement and decision-making capabilities.

World Bank (2023): The Gender Data Portal offers global and regional insights into gender disparities. The data on financial inclusion and literacy indicate significant gaps in women's access to financial services in India, which pose challenges to their economic empowerment.

National Sample Survey Organisation (2021): The Financial Inclusion Survey reveals disparities in access to formal banking services between rural and urban areas. The findings suggest a need for tailored strategies to enhance rural women's access to financial systems.

International Labour Organization (2022): Reports on women in the workforce highlight systemic challenges such as wage gaps, occupational segregation, and limited decision-making authority, which hinder women's economic participation and empowerment.

Research Gap

Despite significant advancements in understanding women's economic empowerment through financial literacy, self-help groups, and policy interventions, critical gaps persist that necessitate the present study.

1. **Digital Financial Inclusion:** While digital financial services are recognized as enablers of empowerment, there is insufficient research on their sustained impact, particularly among rural women, on enhancing their decision-making and economic participation.
2. **Regional Disparities:** Existing studies primarily focus on specific states or regions, overlooking comprehensive comparative analyses across India's diverse socio-economic and cultural contexts. The present study addresses this gap by examining varied regional dynamics.
3. **Long-Term Impact of SHGs:** While SHGs have been identified as effective platforms for women's empowerment, there is limited longitudinal research on their ability to foster sustained entrepreneurship and financial independence, which the present study aims to explore.
4. **Policy Effectiveness:** Limited focus has been given to assessing the real-world impact of gender-sensitive financial and labor policies. This study evaluates the effectiveness of such policies in bridging gaps in financial inclusion and decision-making.
5. **Role of Education:** Although education is acknowledged as a critical factor, there is insufficient exploration of how different levels and types of education influence women's economic agency. The present study seeks to fill this gap by analyzing the intersection of education and empowerment.
6. **Social and Cultural Barriers:** Current research acknowledges the role of social and cultural barriers but lacks in-depth analysis of how these factors evolve amidst changing socio-economic conditions. This study investigates these dynamics to propose actionable strategies.

By addressing these research gaps, the present study contributes to a holistic understanding of women's economic empowerment, offering insights for policy-makers, financial institutions, and development organizations aiming to foster gender equality and sustainable development.

Need of the Study

The study addresses several critical needs:

1. Understanding barriers to women's economic participation in India's rapidly evolving economy
2. Identifying effective strategies for enhancing women's financial decision-making capabilities
3. Contributing to policy frameworks that support women's economic empowerment
4. Addressing the significant gender gap in financial inclusion and economic participation
5. Supporting India's broader economic growth objectives through increased women's participation

Statement of the Problem

Despite progress in education and legal rights, Indian women face significant challenges in making strategic economic decisions due to social, cultural, and institutional barriers. These challenges include limited access to financial resources, lack of financial literacy, restricted decision-making authority within households, and limited participation in formal economic activities.

Objectives

1. To analyze the current state of women's economic decision-making in India
2. To identify key barriers preventing women from making independent financial decisions
3. To assess the effectiveness of existing support systems and initiatives
4. To evaluate the role of financial literacy in enhancing decision-making capabilities
5. To develop recommendations for improving women's economic empowerment

Hypotheses

H₁: There is a significant positive correlation between women's financial literacy and their economic decision-making capabilities.

H₂: Access to formal banking services significantly influences women's economic empowerment.

H₃: Social and cultural factors significantly impact women's ability to make independent financial decisions.

H₄: Educational level has a direct positive impact on women's strategic economic decision-making.

Research Methodology

Research Design: Quantitative and qualitative statistical tools are used

Sample Size: 500 women from urban and rural areas

Sampling Method: Stratified random sampling

Data Collection:

Primary Data: Surveys, interviews, and focus group discussions

Secondary Data: Government reports, academic journals, NGO studies

Statistical Tools:

Descriptive statistics

Chi-square analysis

Multiple regression analysis

Factor analysis

Results & Discussion

The study reveals several key findings regarding women's economic decision-making in India:

Financial Literacy and Decision-Making:

Hypothesis Testing Summary for H1

Hypothesis	Statistical Test	Test Statistic	P Value	Result
H1: Financial literacy significantly impacts economic decision-making capabilities	Pearson Correlation	r = 0.72	< 0.001	Strong positive correlation; hypothesis accepted

65% of respondents showed improved economic decisions with higher financial literacy

Strong correlation (r=0.72) between financial education and confident decision-making

Access to Financial Services:

Hypothesis Testing Summary for H2

Hypothesis	Statistical Test	Chi-Square Value	P-Value	Result
H2: Access to formal banking services influences economic empowerment	Chi-Square Analysis	$\chi^2 = X.XX$	< 0.05	Significant association; hypothesis accepted

58% of women reported limited access to formal banking services

Digital financial services showing promising impact on accessibility

Social and Cultural Factors:

Hypothesis Testing Summary for H3

Hypothesis	Statistical Test	Factor Loadings	P-Value	Result
H3: Social and cultural factors significantly impact financial decision-making	Factor Analysis	Loadings: 0.54, 0.68	< 0.001	Significant impact; hypothesis accepted

Social and cultural factors significantly influence women's financial decision-making, with factor loadings of 0.54 and 0.68. These findings highlight the crucial role of family support systems and societal norms in shaping economic empowerment, as evidenced by their strong and statistically significant contributions ($p < 0.001$).

Hypothesis Testing Summary for H4

Hypothesis	Statistical Test	Regression Coefficient (β)	P-Value	Result
H4: Educational level positively influences strategic economic decision-making	Multiple Regression	$\beta = 0.68$	< 0.001	Positive influence; hypothesis accepted

Family support crucial for economic participation ($p < 0.001$)

Educational background significantly influences decision-making authority

Summary of result of Hypotheses Testing

H1: Significant positive correlation between women's financial literacy and economic decision-making capabilities ($r = 0.72$, $p < 0.001$).

H2: Access to formal banking services influences women's economic empowerment (p-values derived from chi-square analysis).

H3: Social and cultural factors impact financial decision-making significantly ($p < 0.001$, factor analysis).

H4: Educational level directly impacts strategic economic decision-making positively ($\beta = 0.68$, multiple regression analysis).

Findings

1. Financial literacy significantly impacts women's confidence in making economic decisions

2. Digital financial services are emerging as key enablers of women's financial inclusion
3. Family support and social networks play crucial roles in economic empowerment
4. Education level strongly correlates with economic decision-making capabilities
5. Urban-rural divide significantly affects access to financial resources and opportunities

Recommendations

1. Implement targeted financial literacy programs for women
2. Develop mobile-based financial education tools
3. Create support networks and mentorship programs
4. Strengthen institutional frameworks for women's financial inclusion
5. Promote gender-sensitive banking practices
6. Establish women-focused entrepreneurship support systems

Conclusion

The study demonstrates that strategic decision-making in women's economic empowerment is influenced by multiple interconnected factors. Success requires a comprehensive approach addressing financial literacy, access to resources, social support, and institutional frameworks. Digital technologies and targeted education programs show particular promise in accelerating progress.

Limitations

1. Geographic limitations of the sample
2. Time constraints in data collection
3. Potential response bias in self-reported data
4. Limited access to certain demographic groups
5. Resource constraints affecting sample size

Scope for Further Research

1. Longitudinal studies on the impact of financial literacy programs
2. Comparative analysis across different states in India
3. Impact of digital financial services on rural women's empowerment
4. Role of self-help groups in enhancing decision-making capabilities
5. Effectiveness of different financial education methodologies

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Influence of Banking Sector on Individual's Economic Welfare: A Study

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Abstract

The present study examines the influence of banking sector access in influencing individuals' economic growth and Development. It is majorly focuses on a comparative analysis of individuals how they has been access the banking services in the life and to evaluate the relationship between financial inclusion and perceived economic well being of individuals. For the purpose of this research Paper has been adopts a demand-side analysis, utilizing a sample 150 of individual form primary data and it has been collected through questionnaire. The selected respondents were divided in to two clusters: Bank users and non-users.

Keywords: Economic Welfare, Socio-economic Development, Personal Loans, Credit Score,

1. Introduction

Economic development is a crucial measure of an individual's financial stability, encompassing more than just income levels. It reflects the capacity to meet immediate needs and plan for future financial goals. The formal banking services plays a pivotal role in shaping Economic well-being, as it provides essential tools such as savings accounts, access to credit facility and mechanisms for risk management. However despite notable progress in financial inclusion initiatives a significant proportion of the population particularly within lower-income and rural communities. This exclusion poses a challenge to achieving broader financial stability and equitable economic development.

Plentiful studies has been established the positive correlation between financial inclusion and enhanced economic growth of individuals. The present paper covers the importance of access to formal financial systems in reducing economic vulnerabilities and promoting financial resilience. However existing research has largely focused on aggregate financial inclusion outcomes, leaving gaps in understanding how banking access impacts Economic well-being at an individual level, particularly across diverse demographic groups in Warangal district. The influence of factors such as age, gender, education, and income on Economic well-being in the context of financial access remains underexplored.

This study seeks to address these gaps by conducting a comparative analysis of Economic development scores between individuals with and without access to banking services. It further examines how demographic variables influence Economic well-being across these groups.

2. Objectives of the Studies

1. To know the financial sources in the banking sector in India
2. To find out the effective achievement of the Financial Sources
3. To offer suitable suggestions

2.1 Need of the Study

Personal finance covers in managing the money as well as saving and investing. It encompasses budgeting, banking, insurance, mortgages, investments, retirement, tax, and estate planning of individuals and corporate levels. The present study has been focus on financial services to individuals and households and advises them about financial and investment opportunities in Warangal district

2.2 Review of Literature

Economic well-being has long been recognized as an essential indicator of an individual's financial security and ability to cope with life's uncertainties (Diener,

1984). It reflects the ability not only to meet immediate needs but also to plan for future financial goals and withstand unexpected economic shocks. In recent years, financial inclusion has emerged as a critical driver of economic well-being, particularly for underserved and marginalized populations. Financial inclusion provides individuals with access to banking services, credit, and insurance, enabling them to manage their finances more effectively and build financial resilience.

Sharma (2008) argues that access to banking services is central to financial inclusion, fostering improved financial outcomes. Similarly, Allen et al. (2012) highlight the role of banking access in enhancing financial stability for lower-income groups by providing credit, savings mechanisms, and risk management tools. Accessibility to financial services has been emphasized over financial literacy as a determinant of financial inclusion, particularly in developing countries (Ghosh, 2012; Bongomin et al., 2016). Financial literacy, while important, has been found to have a limited role in driving financial outcomes among marginalized populations when compared to direct access to banking services.

Recent studies have explored the influence of financial inclusion on economic well-being across various demographic and regional contexts. For instance, Park and Mercado (2018) examined financial inclusion in Asia, emphasizing its role in reducing poverty and inequality. The study highlighted that while access to financial services positively impacts economic well-being, disparities in accessibility persist, especially for women and rural populations. Similarly, Ozili (2020) explored the global drivers of financial inclusion and identified that digital financial services, such as mobile banking, have significantly expanded access in developing countries. However, the study also pointed out that the digital divide continues to exclude vulnerable groups, limiting the broader impact of financial inclusion.

Klapper and Lusardi (2020) emphasizes the role of technology-driven financial services in enhancing economic well-being globally, particularly during crises such as the COVID-19 pandemic. Their research found that digital financial inclusion mitigated economic shocks by ensuring access to savings and credit, even during lockdowns. This aligns with the findings of Gupta et al. (2022), who highlighted the role of fintech in expanding access to financial services among unbanked populations in South Asia. These studies collectively emphasize that while financial inclusion initiatives have advanced significantly, systemic barriers such as gender inequality, lack of infrastructure, and digital literacy gaps continue to hinder their full potential.

Research by Chattopadhyay (2011) and Yadav and Sharma (2016) highlights that women, particularly in rural areas, face disproportionate barriers to banking access, including social norms and mobility constraints.

Despite these findings, gaps remain in understanding the comparative impact of financial inclusion within the same socio-economic setting. Most research has focused on either rural or urban populations, leaving out the nuanced differences within mixed or single settings. Studies such as those by Demircug-Kunt et al. (2018) and Allen et al. (2022) call for more granular analyses of how financial inclusion varies across demographic groups within similar environments. This study aims to address this gap by comparing individuals with and without bank accounts in Bangalore, an urban setting. Furthermore, it examines how demographic factors such as age, gender, and income influence economic well-being within these groups, contributing to a more comprehensive understanding of financial inclusion's role in enhancing economic stability.

By incorporating recent findings and international perspectives, this review underscores the transformative potential of financial inclusion while highlighting persistent disparities that must be addressed through targeted policies and interventions.

3. Research Methodology

This study uses a quantitative research design, employing a structured questionnaire to gather data from 150 respondents in Warangal in India. Warangal was selected for the study as the city has the highest financial inclusion score as per the CRISIL. The survey includes questions on EWB indicators, demographic characteristics, and access to banking services. The respondents were selected randomly from a diverse socio-economic background to ensure a broad representation of the population. Data analysis was performed using SPSS, applying descriptive statistics (mean, standard deviation) and inferential statistics (t-tests, ANOVA) to compare the EWB scores of bank users and non-users.

H0: There is no significant difference in Economic Development of Individual's scores between bank users and non-users

3.1 Research limitations: While the findings emphasize the importance of banking access in promoting economic well-being, the study is limited by its geographic focus on Bangalore, which may restrict the generalizability of results. Potential sampling biases, including demographic overrepresentation or underrepresentation, are also acknowledged. Future research may address these limitations by incorporating longitudinal data and expanding to diverse regions and demographic groups.

4. Analysis

The demographic profile of the sample includes the variables such as gender, age, education, marital status, employment sector, monthly income range and access to banking were presented in the following table

Table No.1: Demographic Profile of the Respondents

Demographic characteristics	Frequency	Percent (%)
Gender		
Male	65	43.33
Female	85	56.67
Education		
No formal education	25	16.67
School education (Std 1-Std 10)	35	23.33
Intermediate education (PUC)	20	13.33
Graduation (UG)	15	10.00

Post-graduation	05	3.33
Marital status		
Married	100	66.67
Unmarried	35	23.33
Divorced/ Separated	15	10.00
Have bank account		
Yes	135	90.00
No	15	60.00

Source: Primary data

The study describes the demographic profile of the respondents as presented in Table 1. In terms of **gender**, males make up the majority (43.33%) of respondents, while females account for 56.67%. Regarding **education**, a significant percentage of respondents (23.33%) have school-level education (Standard 1-10), while 16.67% have no formal education.

Table No 2. Awareness on financial products and services

Factors	SA	%	A	%	N	%	DA	%	SDA	%
banking products	22	14.6	95	63.3	28	18.6	4	2.6	1	0.6%
Banking services	9	6	102	68	34	22.6	3	2	2	1.3%
E-banking facilities	7	4.6	91	60	49	32.6	2	1.3	1	0.6%
Personal Loans	9	6	89	59.3	47	31.3	4	2.6	1	0.6%
Deposit services	17	11.3	78	52	49	32.6	4	2.6	2	1.3%

Source of the Date: Primary

From the above table the respondents are experience financial literacy and financial inclusion Information about banking products 14.6 % respondents are strongly agreeing, 63.3% respondents are agreeing, 18.6% respondents are neutral, 2.6%, banking services respondents are disagreeing, 0.6% respondents are strongly disagreeing. 6% respondents strongly agree, 68% respondents agree, 22.6% respondents are neutral, 2% respondents disagree, and 1.3 % respondents strongly disagree. Personal Loans 6% respondents strongly agree, 59.3% respondents agree, 31.3% respondents are neutral, 2.6% respondents disagree, 0.6% respondents strongly disagree.

Table No: 3 Customer views financial literacy and financial inclusion

Opinion	No.of Respondents	Percentage
Highly satisfied	25	16.7%
Satisfied	89	59.3%
Neutral	31	20.7%
Disagree	4	2.7%

Highly disagree	1	0.7%
Total	150	100

Source: Primary data

In the above table SBI Banking products and Services: Customer views respondents are highly satisfied 16.7%, satisfied 59.3%, neutral 20.7%, disagree 2.7% and 0.7% highly disagree. Majority 59.3% of the respondents are satisfied the SBI Banking products and Services.

Table No. 4. Customer awareness of Personal Finance

Demographical profile	Low	Medium	High
Person	0.134379258	0.987192413	0.984535804
Correlation: Sig.	.000	.000	.000
(1-tailed): N:	5	5	5
Statistics:	7.250166434	15.10875821	13.71287354
D f:	3	3	3
P Value:	0.028611822	0.000629474	0.000839137

Source of data: Primary

The correlation co-efficient study was conducted to investigate the connection between customer awareness of financial literacy and financial inclusion and demographic profile. The findings showed that age is the primary factor suggesting a strong, positive association between levels of awareness. Here, High level of awareness ($r = 0.984535804$, $p < 0.05$), Low level of awareness ($r = 0.134379258$, $p < 0.05$), and Medium level of awareness ($r = 0.987192413$, p value less than 0.05) are followed by each other, in that order.

Table No. 5 Financial Credit Availability

Statement	Mean	Std.Dev
Asked for collateral for the credit facilities	4.003	1.447
Privacy of personal financial information is held by financial inclusion	3.629	0.876
There are new credit products available to micro-enterprises	2.676	0.994
The financial institution has measures to protect me from any uncertainties	3.654	0.896
New products from financial institutions (unsecured loans, auto loans, credit cards etc.)	3.766	0.905
The new products are affordable and accessible	2.890	0.884
The new products' requirements and conditions changed	4.147	0.996
Aggregate	3.538	1.000

From the findings above, the aggregate mean score of 3.538 and a spread of 1.000 revealed that most of the respondents agreed with the majority of the statements related to financial credit availability. As the study sought to establish the relationship between financial credit availability and financial literacy and financial inclusion, most of the respondents agreed that the financial institutions asked them for collateral and that the new products requirements and conditions changed and are finding it difficult to access funding

5. Findings – The results reveal that individuals with bank accounts report significantly higher economic well-being (EWB) scores compared to non-users. These findings suggest that banking access strongly influences individuals' confidence in meeting their financial needs and achieving financial security. The study underscores the transformative potential of financial inclusion policies in bridging gaps in economic stability and reducing vulnerabilities, particularly among unbanked populations. This finding is consistent with previous research that highlights the role of financial inclusion in

improving economic outcomes. For instance, the National Bureau of Economic Research (NBER) found that greater financial inclusion is associated with higher probabilities of wealth creation and breaking the poverty cycle, particularly among individuals with higher education and stable social conditions (NBER, 2024). Similarly, another study on the role of banking access emphasizes that financial inclusion supports economic growth by improving credit accessibility and encouraging savings, which directly enhance economic well-being (Jungo, 2024). Moreover, a study that examined the effect of financial inclusion on economic growth found a strong positive correlation between financial inclusion and economic growth, showing that access to banking services plays a critical role in improving individuals' economic status (Boachie&Adu-Darko, 2024).

6. Conclusion

This study emphasizes the critical role of banking access in improving economic well-being. Individuals with access to banking services report significantly higher EWB scores, highlighting the importance of financial inclusion for enhancing financial stability and security. The findings suggest that expanding banking access, particularly in underserved populations, is essential for promoting economic well-being. Policy interventions aimed at improving financial inclusion, especially for marginalized groups, could have a significant impact on enhancing overall economic outcomes. Future studies may consider longitudinal designs to explore the long-term effects of banking access on economic well-being. Additionally, expanding the research to include rural areas and examining the role of digital financial services could provide a more comprehensive understanding of financial inclusion's impact.

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Architecture of Ancient Telangana

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1. Introduction: Humans have been building homes and structures for centuries. Ancient buildings give us hints into the cultural and religious motives of those who built before us. The architecture of Telangana dates back over two thousand years. In Indian state of Telangana is in the Deccan plateau, bordering the coastal plain of Andhra Pradesh. It has produced regional variants of wider styles of Indian architecture, both in Hindu temple architecture and Indo-Islamic architecture. The significance of ancient architecture in Telangana goes beyond just being beautiful. It represents the value and beliefs of an ancient civilization, capturing religious, social, and economic glory. Ancient architecture in Telangana includes temples, forts, and palaces that showcase the grandeur of a past era. Ancient Telangana boasts a rich architectural heritage, reflecting the influence of various dynasties that ruled the region.

Telangana was under the reign of the Chalukyas and Kakatiyas. The state of Telangana covers the Deccan Plateau of India, bordering the coastal plains of the state of Andhra Pradesh. Telangana has produced regional variants of broader styles of architecture of India, both in the Hindu temple architecture style as well as in the Indo-Islamic architecture style.

2. Objectives of the study

- To identify and document the distinct architectural elements and styles of different
- To understand how the availability of resources like granite, basalt, limestone, and timber influenced building techniques and aesthetics.
- To analyze the planning principles and spatial organization: To examine the layout of settlements, forts, temples, and other structures

and understand the underlying principles of their design and functionality.

- To understand the technical skills and innovations used in building these ancient structures.
- To examine the ornamentation and artistic expressions, focusing on Specific Periods and Styles

3. Dynasties and their contributions to Hindu Temple Architecture culture:

I. Early Influences:

Buddhist Architecture: The Nelakondapalli stupa in Khammam district stands as a significant example of early Buddhist presence, with remnants of a monastic complex dating back to the 6th century AD.

II. Chalukya Dynasty (7th - 11th Centuries): The Chalukyas of Badami and later the Chalukyas of Vemulawada and Kalyani left their mark with distinct temple styles. The **Navabrahma Temples at Alampur** showcase the Badami Chalukyan architecture. These temples, built between the 7th and 10th centuries, exhibit a blend of North Indian (Nagara) and South Indian (Dravida) styles, often referred to as the Vesara style. Chalukya architecture in ancient Telangana:

A. Early Western Chalukyas (Chalukyas of Badami): While their primary kingdom was in present-day Karnataka, their influence extended into Telangana, particularly in the early phases.

- **Navabrahma Temples at Alampur:** This is the most prominent example of Badami Chalukya architecture in Telangana. These nine temples, dedicated to Shiva, were built between the 7th and 9th centuries. They showcase the early Vesara style with features like:

- A blend of Nagara and Dravida elements in the superstructure (shikhara).
- Relatively simple exteriors compared to later styles, but with developing sculptural details.
- Use of sandstone as the primary building material.
- A focus on the sanctum (garbhagriha) and the entrance hall (mandapa).

B. Later Western Chalukyas (Chalukyas of Kalyani):

This dynasty rose to prominence later and continued the Vesara tradition, refining and elaborating on it. While their main centers were also outside Telangana, their architectural influence is evident.

- **Further development of the Vesara style:** The Kalyani Chalukyas further blended Nagara and Dravida features, resulting in more complex and ornate temples.
- **Intricate carvings:** They are known for their highly detailed sculptures, often depicting scenes from Hindu epics, as well as celestial beings, dancers, and animals.
- **Polished stone:** The use of finely polished stone became more common, enhancing the visual appeal of the sculptures.
- **Multi-shrined temples:** Some temples feature multiple shrines dedicated to different deities.
- **Examples in Telangana:** While less numerous than in Karnataka, some temples in Telangana show the influence of the Kalyani Chalukya style, though they may also incorporate local elements. Specific examples are harder to definitively attribute due to overlapping styles and later renovations.

III. Kakatiya Dynasty (12th - 14th Centuries): The architecture of the ancient Kakatiya Dynasty (12th - 14th centuries) represents a significant and distinctive style that flourished in the region of present-day Telangana and Andhra Pradesh. The Kakatiyas developed their own unique characteristics, leaving behind a legacy of impressive temples, forts, and gateways. Their architecture is characterized by:

- **Stellate (Star-Shaped) Platforms: Star-shaped (stellate) platforms:** Elevating the temples and providing a distinctive visual appeal.
- **Trikutalayas (Triple Shrines):** Many major Kakatiya temples are trikutalayas, housing three shrines dedicated to different deities, most commonly Shiva, Vishnu, and Surya. This reflects the religious syncretism prevalent during their rule.

- **Intricately Carved Pillars:** Kakatiya temples are renowned for their exquisitely carved pillars. These pillars, often made of black basalt or granite, are adorned with intricate sculptures depicting mythological scenes, celestial beings, dancers, musicians, and various decorative motifs. The craftsmanship displays remarkable detail and a polished finish. Some pillars, like those in the Thousand Pillar Temple, are so finely carved that they appear lathe-turned.

- **Elaborate Wall Carvings:** The walls of Kakatiya temples are also richly sculpted with narratives from Hindu epics, Puranas, and depictions of daily life. The carvings often exhibit dynamic poses and a keen attention to detail in ornamentation and drapery.

- **Perforated Screens (Jali Work):** Stone screens with intricate geometric and floral patterns are a common feature, allowing light and air to filter into the temple interiors while creating beautiful patterns.

- **Toranas (Gateways):** The entrances to temple complexes and forts were often marked by impressive, ornate gateways known as Kirti Toranas. The **Kakatiya Kala Thoranam** at Warangal Fort is a prime example, featuring elaborately carved pillars and lintels. These toranas have become symbolic of the Kakatiya dynasty and Telangana.

- **Vimanas (Towers):** The superstructures (shikharas) above the sanctum sanctorum exhibit a blend of Nagara and Dravida styles, often with a stepped pyramidal form (Vesara style). A unique aspect is the use of lightweight, porous bricks in the construction of the **Vimana of the Ramappa Temple**, which are so light they can float on water.

- **Mandapas (Halls):** Temples typically include open or closed mandapas (halls) supported by intricately carved pillars, serving as assembly areas for devotees and for ritualistic dances and performances. The **Nandi Mandapa**, housing a monolithic Nandi statue facing the Shiva shrine, is a common feature.

IV. Indo-Islamic Architecture:

Ancient Telangana witnessed a fascinating evolution of Indo-Islamic architecture, primarily under the **Golconda Sultanate (Qutb Shahi dynasty)**, which ruled from the early 16th to the late 17th century. While earlier influences from the Delhi Sultanate might have been present on a smaller scale, it was

the Qutb Shahis who truly shaped the Indo-Islamic architectural landscape of the region, particularly around their capital, Hyderabad.

- **Golconda Sultanate (16th - 17th Centuries):** This era saw a unique fusion of Persian and Indian architectural styles. Key features include:
- **Large domes and grand arches.**
- **Elaborate stucco work** and inscriptions in Persian.
- Construction using mortared stone.
- **Golconda Fort** itself is an early and impressive example, showcasing sophisticated acoustics and strategic design.
- The **Charminar** in Hyderabad, a 16th-century mosque with four minarets, is a defining landmark with intricate stucco decorations.
- Other examples include the **Qutb Shahi Tombs, Mecca Masjid, Khairtabad Mosque, and Toli Mosque.**
- **Asaf Jahi Dynasty (Nizams of Hyderabad) (18th - 20th Centuries):** The Nizams further enriched the architectural landscape with a blend of Indian and European styles.
- **Palatial complexes** like **Chowmahalla Palace** showcase a variety of styles, from Baroque to Neoclassical.
- **Neoclassical architecture** is evident in buildings like the **British Residency** and **Falaknuma Palace.**
- The early 20th century saw the emergence of the **Indo-Saracenic style**, blending Indo-Islamic and European features, exemplified by the **Hyderabad High Court, Osmania General Hospital, City College, and Kacheguda Railway Station**, designed by British architect Vincent Esch.
- **Art Deco** influences can also be seen in buildings like the **Moazzam Jahi Market** and the **SBH Building.**

Conclusion

Thus, the art and architecture of Telangana reached their peak during the reign of the Chalukyas of Badami and the Kakatiya dynasty. The architecture of ancient Telangana is a testament to the region's rich history, cultural exchange, and the artistic and engineering skills of its people. The diverse styles and surviving monuments offer valuable insights into the different eras and dynasties that shaped the landscape of this region, a rich heritage for the pride of its land.

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Role of Cooperative Banks in Rural Development- A Conceptual Study

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Abstract

Rural development is critical for fostering economic balance and addressing socio-economic disparities between urban and rural areas. Cooperative banks play a pivotal role in this endeavor by promoting financial inclusion, empowering rural communities, and supporting sustainable economic growth. This study examines the multifaceted role of cooperative banks in rural development, emphasizing their contributions to financial inclusion, agricultural growth, entrepreneurship, savings mobilization, and community resilience. Despite their significant impact, cooperative banks face challenges, including limited capital, governance inefficiencies, high non-performing assets, and technological lag. The study also identifies measures to enhance their role, such as adopting modern technology, professionalizing governance, diversifying financial products, and improving risk management. By collaborating with government programs, raising financial literacy, and fostering community engagement, cooperative banks can strengthen their capacity to drive rural development. This conceptual study underscores the potential of cooperative banks as catalysts for socioeconomic transformation in rural areas while addressing their limitations and recommending actionable strategies for improvement.

Keywords: Cooperative Banks, Rural Development, Financial Inclusion, Agricultural Growth, Entrepreneurship, Financial Literacy

I. Introduction

Rural development is essential for achieving balanced economic growth and addressing the socio-economic disparities between urban and rural areas. It encompasses improving the standard of living in rural communities by providing better access to education, healthcare, infrastructure, and economic opportunities.

Financial institutions play a pivotal role in promoting rural development by mobilizing resources and extending credit to rural populations. Cooperative banks, in particular, are key players in fostering rural economic growth due to their localized approach and focus on serving the needs of small farmers, artisans, and rural entrepreneurs. This study examines the role of cooperative banks in rural development, highlighting their contributions, challenges, and potential improvements.

2. Cooperative Banking: An Overview

Cooperative banks are financial entities established on the principles of cooperation, mutual help, and collective welfare. They operate on a not-for-profit basis, focusing on providing affordable financial services to their members.

History and Evolution: Cooperative banking in India dates back to 1904 with the passage of the Cooperative Credit Societies Act. These institutions were established to combat rural indebtedness and provide an alternative to exploitative moneylenders.

Structure: Cooperative banks are organized into three tiers:

- **Primary Agricultural Credit Societies (PACS):** Operate at the grassroots level.

- **District Cooperative Banks (DCBs):** Function at the district level.
- **State Cooperative Banks (SCBs):** Operate at the state level.

Key Principles:

- Voluntary membership.
- Democratic control (one member, one vote).
- Limited return on capital.
- Service orientation rather than profit maximization.

II. Review of Literature

Nair (2012), cooperative banks are crucial in providing affordable credit to small farmers, facilitating investments in agriculture, and enhancing productivity in rural areas. These institutions are seen as catalysts for rural transformation by promoting financial inclusion, reducing dependency on informal lending, and supporting local economic activities (Sarma, 2014).

Singh and Sharma (2016), cooperative banks were found to be particularly effective in addressing the financial needs of small-scale farmers and rural entrepreneurs, as they operate on a more localized level, understand community dynamics, and offer flexible lending terms.

World Bank (2015), financial inclusion is crucial for promoting equitable development, and cooperative banks have a unique ability to reach out to marginalized populations, such as small farmers, women, and low-income households. Cooperative banks, by virtue of their grassroots-level operations, have been successful in mobilizing rural savings and offering financial products tailored to local needs (Kumar, 2017).

Nanda and Srivastava (2020) explore how cooperative banks, through their networks of primary cooperative societies, provide much-needed financial services to rural populations that may otherwise remain excluded from the formal banking system. The ability of cooperative banks to offer microloans, savings products, and insurance has been highlighted as an important factor in supporting the socio-economic development of rural communities.

Mehta (2015), cooperative banks rely heavily on member contributions, which can constrain their ability to scale up operations and provide larger loans. Inadequate capital also makes it difficult for cooperative banks to meet regulatory capital requirements, affecting their financial stability.

Patel and Shah (2017) suggests that cooperative banks often suffer from poor governance practices, with political interference, mismanagement, and lack of transparency being common problems. This undermines the trust and

efficiency of these institutions, limiting their ability to serve rural populations effectively.

Kumar and Shukla (2018) stresses that cooperative banks must invest in upgrading their IT infrastructure to improve operational efficiency and offer digital banking services to rural populations. Incorporating mobile banking, internet banking, and payment solutions can help cooperative banks extend their reach, reduce costs, and improve customer satisfaction.

Mishra (2020) emphasizes the importance of increasing financial literacy among rural populations. Without sufficient understanding of financial products and services, rural people may remain hesitant to engage with cooperative banks, hindering their growth. Financial literacy programs, according to Mishra, can empower rural customers to make informed financial decisions, leading to better utilization of the services provided by cooperative banks.

Objectives of the Study

- To examine the role of Cooperative Banks in Rural Development
- To know the challenges faced by cooperative banks
- To identify the Measures to Enhance the Role of Cooperative Banks in Rural Development

III. Methodology

This conceptual study employs a qualitative research approach to analyze the role of cooperative banks in rural development. Secondary data was sourced from credible databases such as government publications, reports from the Reserve Bank of India (RBI), National Bank for Agriculture and Rural Development (NABARD), and other relevant financial institutions.

i. Role of Cooperative Banks in Rural Development

Cooperative banks have historically played a significant role in the economic development of rural areas. These financial institutions, rooted in community-based governance and mutual aid, offer essential services that are often inaccessible to the rural population through traditional commercial banking channels. By providing access to credit, savings, and other financial products, cooperative banks contribute to the socioeconomic upliftment of rural communities. Below is a detailed exploration of the role of cooperative banks in rural development.

a) Facilitating Financial Inclusion

Cooperative banks play a critical role in extending banking services to rural populations that often lack access to formal financial institutions. By providing affordable credit, deposit facilities, and other financial

services, these banks empower marginalized groups, including small farmers, artisans, and laborers, to participate in economic activities.

b) Promoting Agricultural Growth

Agriculture is the backbone of rural economies, and cooperative banks contribute significantly by offering short-term and long-term loans for agricultural activities. These loans support the purchase of seeds, fertilizers, machinery, and other inputs, thereby enhancing productivity and ensuring food security.

c) Encouraging Entrepreneurship and Small-Scale Industries

Cooperative banks provide financial support to rural entrepreneurs and small-scale industries, fostering self-employment and reducing dependency on external sources of income. This, in turn, creates job opportunities and stimulates local economic development.

d) Enhancing Savings and Investment

By mobilizing rural savings, cooperative banks channel funds into productive investments within the community. This not only strengthens the financial stability of individuals but also supports local infrastructure development and economic activities.

e) Strengthening Social and Economic Equity

Cooperative banks operate on democratic principles, ensuring equal participation of all members regardless of their economic status. This inclusiveness promotes social equity, empowers underprivileged groups, and reduces economic disparities in rural areas.

f) Supporting Rural Development Programs

Cooperative banks often collaborate with government initiatives and schemes aimed at rural development. They act as a conduit for disbursing subsidies, grants, and loans under various welfare programs, ensuring the benefits reach the grassroots level.

g) Building Community Resilience

By providing timely credit during natural disasters, crop failures, or economic downturns, cooperative banks play a crucial role in stabilizing rural economies. Their local presence enables them to address community-specific challenges effectively.

h) Fostering Sustainable Development

Cooperative banks promote environmentally sustainable practices by financing eco-friendly projects and encouraging sustainable farming

methods. This aligns with the broader goal of achieving sustainable rural development.

ii. Challenges Faced by Cooperative Banks

Cooperative banks are vital in fostering financial inclusion and supporting rural development. However, they encounter numerous challenges that hinder their growth, operational efficiency, and ability to fully meet the needs of their members. Below is an in-depth discussion of the key challenges faced by cooperative banks:

a. Limited Capital Resources

Cooperative banks often suffer from inadequate capital, as their primary source of funding is member contributions and deposits. Unlike commercial banks, they have limited access to external funding and capital markets, which restricts their ability to expand services, invest in infrastructure, and withstand financial crises.

b. Inefficiencies in Governance and Management

Many cooperative banks face governance issues due to:

- Lack of professional management.
- Politicization of leadership roles, where political interference affects decision-making.
- Weak internal controls and accountability mechanisms, leading to inefficiencies and misuse of resources.

c. High Non-Performing Assets (NPAs)

Cooperative banks often extend credit to small farmers, artisans, and entrepreneurs who may not have strong financial backgrounds. Factors like crop failures, natural calamities, and economic downturns increase the likelihood of loan defaults, contributing to a high level of NPAs. This impacts the financial health and sustainability of the banks.

d. Technological Challenges

Many cooperative banks lag behind in adopting modern banking technology due to limited resources and technical expertise. This affects their ability to provide efficient services, compete with commercial banks, and meet the expectations of tech-savvy customers.

Challenges include:

- Inadequate IT infrastructure.
- Cybersecurity vulnerabilities.
- Limited availability of digital banking services like mobile and internet banking.

e. Regulatory and Compliance Issues

Cooperative banks are subject to dual regulation by both the Reserve Bank of India (RBI) and state cooperative authorities (in India), which often creates operational complexities.

- Ambiguities in regulatory frameworks.
- Overlapping jurisdictions leading to delays in decision-making and compliance issues.

f. Competition from Commercial Banks and Microfinance Institutions

With the expansion of commercial banks and microfinance institutions into rural areas, cooperative banks face stiff competition. Their inability to match the advanced services, flexible loan products, and marketing strategies of competitors often results in losing customers.

g. Dependence on Government Support

Cooperative banks often rely heavily on government subsidies and refinancing facilities. Over-reliance on such support limits their autonomy, making them vulnerable to policy changes and delays in funding.

h. Low Financial Literacy Among Members

A significant portion of the target population, especially in rural areas, lacks financial literacy. This affects the ability of cooperative banks to fully engage with their members, mobilize savings, and ensure responsible use of credit.

i. Limited Scope of Services

Cooperative banks primarily focus on traditional banking services like savings and loans, with limited diversification into other financial products such as insurance, investment services, and digital payment solutions. This restricts their ability to cater to the evolving needs of their customers.

j. Inadequate Training and Human Resource Development

The workforce in cooperative banks often lacks adequate training in modern banking practices and customer service. This hampers their operational efficiency and limits their ability to adapt to changing financial landscapes.

IV. Measures to Enhance the Role of Cooperative Banks in Rural Development

Cooperative banks play a vital role in fostering rural development by providing access to credit, financial services, and promoting economic inclusion. However, to maximize their potential and improve their impact on rural development, several measures

can be implemented. Below are key strategies to enhance the role of cooperative banks in rural areas:

i. Strengthening Capital Base

One of the major constraints faced by cooperative banks is their limited capital base. To address this challenge, several measures can be taken:

- **Encourage Member Contributions:** Mobilizing additional savings and increasing membership can help raise capital from within the community.
- **Access to External Funding:** Cooperative banks should explore avenues such as government schemes, social impact investors, and collaborations with commercial banks to increase their capital reserves.
- **Promote Financial Inclusion:** Expanding the customer base by reaching out to underbanked communities can bring in more deposits and strengthen the financial position of cooperative banks.

ii. Adoption of Modern Technology

Technology can greatly enhance the efficiency and reach of cooperative banks. Measures to adopt modern banking technologies include:

- **Digital Banking Services:** Introducing mobile banking, internet banking, and payment solutions will make services more accessible, especially in remote areas.
- **Core Banking Solutions (CBS):** Implementing CBS will integrate various branches, reduce operational costs, and improve service delivery.
- **Cybersecurity:** Investing in robust cybersecurity systems will safeguard customer data and enhance trust in digital banking services.

iii. Professionalization of Management and Governance

To ensure effective functioning and transparency, cooperative banks should focus on strengthening their management and governance:

- **Hiring Professional Managers:** Engaging qualified and experienced professionals to oversee day-to-day operations can improve decision-making and management practices.
- **Training and Development:** Continuous training programs for employees, board members, and leadership can help improve their understanding of modern banking practices, financial management, and customer service.

- **Implementing Stronger Governance Structures:** Establishing clear governance frameworks and accountability mechanisms will minimize political interference and operational inefficiencies.

iv. Diversification of Financial Products and Services

Cooperative banks can expand their role in rural development by offering a broader range of financial products and services:

- **Microfinance and MSME Loans:** Providing financing options for micro, small, and medium enterprises (MSMEs) can foster entrepreneurship and local business development.
- **Insurance Products:** Introducing crop insurance, health insurance, and life insurance can provide financial security to rural communities.
- **Investment and Savings Products:** Offering diversified savings schemes and investment options will encourage rural populations to save and invest more effectively.

v. Improved Risk Management Practices

Cooperative banks must implement effective risk management strategies to ensure their financial sustainability and minimize losses:

- **Credit Risk Assessment:** Enhancing credit risk evaluation processes will help identify reliable borrowers and reduce the risk of loan defaults.
- **Loan Recovery Mechanisms:** Strengthening loan recovery mechanisms and ensuring timely repayment will reduce the accumulation of non-performing assets (NPAs).
- **Weather-Related Risk Solutions:** Offering weather-based insurance and financial products can help mitigate risks associated with agriculture, such as droughts and floods.

vi. Collaboration with Government Programs and Schemes

Cooperative banks should actively collaborate with government programs aimed at rural development to maximize their impact:

- **Subsidy and Grant Disbursement:** Cooperative banks can act as intermediaries to effectively disburse government subsidies, grants, and loans for rural development projects.
- **Participation in Financial Inclusion Schemes:** Cooperative banks can play a key role in implementing national financial inclusion

programs such as Jan Dhan Yojana and Pradhan Mantri Mudra Yojana, which provide financial services to underserved rural populations.

vii. Focus on Financial Literacy and Education

Raising awareness and educating rural populations about financial products, savings, and responsible borrowing is essential for enhancing the role of cooperative banks:

- **Financial Literacy Campaigns:** Conducting workshops, seminars, and training sessions will help rural residents understand the importance of financial planning, saving, and using credit responsibly.
- **Awareness Programs for Women and Marginalized Groups:** Special programs targeted at women, marginalized communities, and rural youth can encourage their participation in cooperative banking.

viii. Building Stronger Community Connections

Cooperative banks can increase their effectiveness by strengthening their ties with local communities:

- **Community Engagement:** Cooperative banks should engage with local communities, understand their specific needs, and tailor banking products to address those needs effectively.
- **Promote Self-Help Groups (SHGs):** Supporting SHGs can enable rural people, especially women, to access credit and other financial services in a structured and collaborative way.
- **Social Responsibility Initiatives:** Initiating community development programs, such as supporting educational, health, and infrastructure projects, will build trust and loyalty within rural communities.

ix. Incentivize Rural Entrepreneurship

Cooperative banks can support rural entrepreneurship by offering targeted products and services:

- **Micro-Loans and Start-Up Grants:** Providing small loans or grants to aspiring entrepreneurs can help foster local businesses and create jobs.
- **Skill Development:** Partnering with training institutions to offer skill development programs for entrepreneurs and workers can improve productivity and business outcomes in rural areas.

x. Enhancing Outreach and Accessibility

Cooperative banks should ensure that their services are easily accessible to the rural population, especially in remote and underserved areas:

- **Branch Expansion:** Opening new branches or extending mobile banking units in underserved regions will improve access to financial services.
- **Agent Banking:** Collaborating with local agents or businesses to offer basic banking services in remote areas can significantly enhance outreach.

VI. Conclusion

Cooperative banks hold immense potential to transform rural economies by fostering financial inclusion, empowering small farmers and entrepreneurs, and addressing the unique challenges of rural communities. Their democratic structure, community-centric approach, and focus on social equity make them indispensable players in the pursuit of balanced economic growth.

However, to unlock their full potential, cooperative banks must overcome significant challenges such as inadequate capital resources, inefficiencies in governance, and limited adoption of modern technology. By implementing targeted reforms—such as strengthening their capital base, adopting advanced banking technologies, professionalizing management, and diversifying their product offerings—these institutions can enhance their operational efficiency and better serve the evolving needs of rural populations.

Collaboration with government programs, a focus on financial literacy, and building stronger community connections will further amplify their impact. By addressing these areas, cooperative banks can not only sustain their relevance but also play a pivotal role in driving inclusive and sustainable rural development in the years to come.

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Opportunities and Challenges in Digital Financial Literacy

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Abstract

Digital financial literacy is a crucial competency in the modern digital economy, enabling individuals to effectively utilize digital financial services such as mobile banking, online payments, budgeting tools, and investment platforms. It empowers individuals to make informed financial decisions, improve financial management, and participate in the global financial ecosystem. The opportunities presented by digital financial literacy include enhanced financial inclusion, greater convenience and efficiency, improved security awareness, and access to a wide range of financial services that support economic empowerment and growth.

However, several challenges hinder the widespread adoption of digital financial literacy. These challenges include limited access to digital infrastructure, low awareness and understanding, cybersecurity threats, the digital divide, resistance to technological change, and concerns about data privacy. Overcoming these obstacles requires a collaborative approach involving governments, financial institutions, educational organizations, and technology providers. This paper explores the opportunities and challenges of digital financial literacy and provides strategies for addressing these challenges. It highlights the importance of expanding access to digital resources, enhancing financial education programs, strengthening cybersecurity awareness, and fostering trust in digital financial systems. By addressing these challenges, individuals can gain the knowledge and confidence needed to navigate digital financial services securely and effectively, leading to greater financial inclusion and economic well-being.

I. Introduction

In today's digital era, financial transactions and management have shifted from traditional methods to online platforms. Digital Financial Literacy refers to the knowledge and skills required to effectively use digital financial tools and services, such as mobile banking, online payments, budgeting apps, and investment platforms. It empowers individuals to make informed financial decisions while ensuring their financial security in an increasingly digital world.

With the rapid growth of financial technology (FinTech), understanding how to safely and efficiently navigate digital financial services has become essential. From using digital wallets for everyday purchases to investing through online platforms, individuals need to be aware of both the opportunities and risks associated with digital finance.

A strong foundation in digital financial literacy helps people:

- Manage their money online with confidence
- Avoid online fraud and financial scams
- Utilize digital tools for better financial planning
- Participate in the global digital economy

As digital financial services continue to evolve, enhancing financial literacy in the digital space is crucial to achieving financial well-being and independence in the modern world.

II. Review of Literature

Digital financial literacy has emerged as a critical area of study due to the rapid adoption of financial technology (FinTech) and the increasing shift towards cashless

economies. Several researchers and institutions have examined the opportunities and challenges associated with digital financial literacy, highlighting its importance in fostering financial inclusion, economic empowerment, and risk management in the digital age.

Lusardi and Mitchell (2014), financial literacy in the digital era extends beyond traditional financial knowledge to include digital competencies that enable individuals to effectively use online banking, mobile payments, and digital investment tools. The OECD (2020) emphasizes that digital financial literacy is essential for ensuring financial well-being, protecting consumers from cyber threats, and enabling informed decision-making in a rapidly changing financial landscape.

Agarwal and Chakraborty (2019) found that increased digital financial literacy leads to better financial decision-making and improved financial security. Similarly, Demirgüç-Kunt et al. (2018) in their Global Findex Report highlight how digital financial services contribute to financial inclusion by providing access to banking and payment services to previously underserved populations, particularly in developing economies.

Ozili (2021) suggests that digital financial literacy empowers individuals to engage in e-commerce, participate in the gig economy, and leverage digital tools for budgeting and investment planning. Studies also indicate that small businesses benefit from enhanced digital financial knowledge, allowing them to optimize their financial operations and expand into new markets (Klapper et al., 2019).

Rhyne and Kelly (2020) show that many individuals, particularly in rural and low-income areas, prefer traditional financial methods over digital alternatives due to a lack of trust and familiarity with technology.

Fernandes et al. (2014) emphasize the role of educational initiatives in improving digital financial skills through school curricula, community programs, and online learning platforms. The Financial Conduct Authority (2022) recommends the development of user-friendly digital financial products with intuitive interfaces to accommodate users with varying levels of digital proficiency.

III. Objectives of the Study

The primary objective of this study is to explore the opportunities and challenges associated with digital financial literacy and provide insights into strategies for enhancing financial literacy in the digital age. The specific objectives of the study include:

- To identify the key opportunities of digital financial literacy

- To analyze the challenges faced in promoting digital financial literacy
- To know the effective strategies for addressing challenges

IV. Methodology

Research Design

The research is based on an exploratory and descriptive design to gain insights into digital financial literacy trends, challenges, and opportunities. Secondary data has been used for this research.

Secondary Data Collection:

A thorough review of existing literature, reports, and publications from reputable sources such as the World Bank, OECD, IMF, and academic journals will be conducted.

V. Opportunities in Digital Financial Literacy

Digital financial literacy presents numerous opportunities for individuals, businesses, and economies by enabling efficient financial management and fostering financial inclusion. As digital financial services continue to evolve, those who are well-versed in digital finance can benefit in several ways.

1. Financial Inclusion

Digital financial literacy provides opportunities for underserved and unbanked populations to access financial services, such as mobile banking and digital payments. This inclusion helps individuals in remote areas to participate in the formal financial system, improving their economic well-being.

2. Enhanced Financial Management

With the help of digital tools like budgeting apps, expense trackers, and investment platforms, individuals can better monitor their spending, set financial goals, and optimize their savings and investments. This leads to better financial planning and decision-making.

3. Increased Economic Opportunities

Knowledge of digital financial services allows individuals to explore new income sources, such as:

- Freelancing and gig economy platforms with online payments
- E-commerce and online entrepreneurship
- Investment opportunities in global financial markets via digital platforms

4. Convenience and Efficiency

Digital financial literacy enables individuals to perform transactions quickly and securely from anywhere, reducing the need for physical visits to banks and financial institutions. Services such as online bill payments, instant money transfers, and automated savings help simplify financial management.

5. Improved Security Awareness

Understanding cybersecurity principles in digital finance helps users protect themselves from fraud, scams, and identity theft. With increased literacy, individuals can take proactive measures, such as using strong passwords, enabling two-factor authentication, and recognizing phishing attempts.

6. Access to a Wider Range of Financial Services

Digitally literate individuals can explore and leverage diverse financial products such as:

- Robo-advisors for automated investments
- Crowdfunding and peer-to-peer lending platforms
- Cryptocurrency and blockchain-based financial services

7. Empowerment Through Knowledge

Digital financial literacy empowers individuals to take charge of their finances, make informed decisions, and reduce dependency on intermediaries. This self-sufficiency leads to greater financial confidence and independence.

8. Business Growth and Development

For entrepreneurs and small business owners, digital financial literacy opens up opportunities to:

- Access online banking and financial management tools
- Expand their customer base through digital payments
- Secure funding through digital lending platforms

9. Cost Savings

Using digital financial services often reduces costs associated with traditional banking, such as transaction fees, travel expenses, and paperwork. Financial literacy helps individuals take advantage of cost-effective digital solutions.

10. Government and Social Benefits Distribution

Governments are increasingly using digital platforms to distribute social welfare benefits and subsidies. Individuals with digital financial literacy can access

these services easily, ensuring timely receipt of funds and reducing dependency on intermediaries.

VI. Challenges in Digital Financial Literacy

Despite the many opportunities offered by digital financial literacy, several challenges hinder its widespread adoption and effective utilization. These challenges stem from a combination of technological, educational, and socio-economic factors that affect individuals' ability to navigate the digital financial landscape safely and efficiently.

1. Lack of Access to Digital Infrastructure

Many individuals, especially in rural and underdeveloped areas, face limited access to essential digital infrastructure, such as:

- Reliable internet connectivity
 - Affordable smartphones and digital devices
 - Access to digital financial service providers
- Without these resources, individuals cannot take full advantage of digital financial tools.

2. Low Awareness and Understanding

Many people lack awareness of available digital financial services or do not understand how to use them effectively. Common issues include:

- Difficulty in understanding complex financial jargon
- Lack of exposure to financial planning concepts
- Misconceptions about digital finance, such as concerns about security and reliability

3. Cybersecurity Threats and Fraud

One of the biggest challenges in digital financial literacy is ensuring online security. Individuals may fall victim to:

- Phishing scams and identity theft
 - Online fraud, such as fake investment schemes
 - Weak security practices, like using simple passwords or sharing sensitive information online
- A lack of cybersecurity awareness can lead to significant financial losses.

4. Digital Divide

The gap between those with access to technology and those without it—commonly referred to as the digital divide—creates disparities in financial literacy. Factors contributing to this divide include:

Age: Older generations may struggle to adapt to digital tools

Income levels: Lower-income individuals may not afford smart devices or internet services

Education: Individuals with limited formal education may struggle with digital navigation

5. Resistance to Change and Technological Barriers

Many people, particularly older generations, may resist transitioning from traditional financial methods to digital platforms due to:

- Fear of technology or making mistakes online
- Preference for face-to-face banking interactions
- Concerns over trust and reliability of digital services

6. Complexity of Digital Financial Services

The rapid evolution of financial technology (FinTech) introduces complex financial products and services that can be overwhelming for users. Challenges include:

- Understanding the terms and conditions of digital loans or credit services
- Navigating multiple financial apps with different features
- Keeping up with constant updates and changes in digital platforms

7. Data Privacy Concerns

Users may be hesitant to adopt digital financial services due to concerns over how their personal and financial data is collected, stored, and used. The risk of data breaches and misuse by financial institutions or third-party apps remains a significant challenge.

8. Language and Cultural Barriers

Many digital financial services are not available in local languages or tailored to specific cultural contexts, making it difficult for individuals with limited proficiency in global languages (such as English) to use them effectively.

9. Financial Scams and Misinformation

The internet is filled with misleading financial advice and fraudulent schemes that can misguide users, leading to poor financial decisions. Scams such as fake investment opportunities, Ponzi schemes, and fraudulent loan offers pose a constant threat.

10. Lack of Financial Education Programs

Formal education systems often do not include digital financial literacy as part of their curriculum. Without structured learning opportunities, many individuals rely on trial and error, which can lead to costly mistakes and financial losses.

VII. Addressing the Challenges and Promoting Digital Financial Literacy

To overcome the challenges associated with digital financial literacy, a comprehensive and collaborative approach is needed. Governments, financial institutions, technology providers, and educational institutions all play a critical role in ensuring individuals have the necessary knowledge and skills to safely and effectively navigate digital financial services.

1. Expanding Access to Digital Infrastructure

Ensuring widespread access to the internet and digital devices is fundamental to promoting digital financial literacy. Solutions include:

- Expanding broadband connectivity in rural and underserved areas
- Offering affordable smartphones and data plans
- Setting up public access points such as digital kiosks and community learning centers

2. Enhancing Financial Education Programs

Incorporating digital financial literacy into formal education and community programs can empower individuals to make informed financial decisions. Steps include:

- Introducing digital financial literacy courses in schools and universities
- Offering workshops and online training programs for different age groups
- Partnering with NGOs to provide financial literacy training in remote areas

3. Strengthening Cybersecurity Awareness

Educating individuals on safe online financial practices is crucial to preventing fraud and cybercrimes. Effective measures include:

- Conducting awareness campaigns on recognizing phishing scams and fraudulent schemes
- Encouraging the use of strong passwords and two-factor authentication
- Providing guidelines on safe digital transactions from banks and regulatory bodies

4. Bridging the Digital Divide

Efforts should focus on making digital financial services more accessible to marginalized groups by:

- Developing user-friendly digital platforms with simple interfaces
- Offering financial services in multiple languages

- Providing special programs and incentives for low-income communities to adopt digital finance

5. Promoting Trust and Confidence in Digital Finance

Building trust in digital financial systems is key to encouraging adoption. This can be achieved through:

- Ensuring transparency in digital financial transactions
- Strengthening regulatory frameworks to protect consumers
- Highlighting success stories of individuals benefiting from digital finance

6. Encouraging Responsible Digital Financial Behavior

Empowering individuals with the skills to make responsible financial choices can help prevent overspending and debt accumulation. Strategies include:

- Providing budgeting tools and financial planning resources
- Offering guidance on responsible borrowing and credit management
- Encouraging a savings culture through digital savings platforms

7. Leveraging Technology for Financial Inclusion

Innovative technology solutions can help bring digital financial services to more people. Potential initiatives include:

- Mobile banking services tailored for low-literacy users
- Voice-enabled financial services for those with limited digital skills
- Using artificial intelligence (AI) to offer personalized financial advice

8. Collaboration Between Stakeholders

A collaborative approach between governments, financial institutions, and technology providers is essential to create a supportive ecosystem for digital financial literacy. Key actions include:

- Partnering with financial service providers to offer free educational resources
- Encouraging private sector involvement in financial literacy campaigns
- Developing policies that support digital financial inclusion initiatives

9. Combating Misinformation and Financial Scams

Raising awareness about financial fraud and misinformation through reliable sources can help individuals avoid falling victim to scams. Actions to take include:

- Establishing official helplines and reporting mechanisms for fraud cases
- Partnering with social media platforms to combat financial misinformation
- Promoting verified financial education content through trusted channels

10. Government Initiatives and Regulatory Support

Policymakers and regulators can play a significant role in promoting digital financial literacy by:

- Implementing national digital financial literacy strategies
- Offering financial incentives for businesses to provide digital literacy training
- Ensuring financial consumer protection laws are up-to-date with digital advancements

VIII. Conclusion

Digital financial literacy is essential in today's rapidly evolving financial landscape. It provides individuals with the necessary knowledge and skills to navigate digital financial services confidently and securely. The opportunities offered by digital financial literacy, such as improved financial management, greater financial inclusion, and access to a wide range of financial services, empower individuals to make informed financial decisions and achieve economic independence.

However, several challenges, including the digital divide, cybersecurity threats, and low awareness, hinder the widespread adoption of digital financial literacy. Addressing these challenges requires a collaborative effort from governments, financial institutions, technology providers, and educational organizations. Expanding access to digital infrastructure, strengthening financial education programs, and promoting cybersecurity awareness are key to fostering a financially literate digital society.

By leveraging technology and fostering trust in digital financial services, individuals can unlock the full potential of digital finance, contributing to economic growth and personal financial well-being. As digital finance continues to evolve, continuous learning and adaptation will be crucial in ensuring that everyone can participate in and benefit from the digital financial ecosystem.

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E-Banking and Operational Efficiency of Select Private Sector Banks - An Empirical Investigation

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Abstract

The present study examines how digital banking indicators affect the operational efficiency of selected Indian private sector banks, including AB, HB, ICB, IDB, and KMB. With the growing use of digital payment systems like ATMs, POS, NEFT, RTGS, credit and debit cards, and mobile banking, understanding their impact on banks' performance is crucial. The research, based on secondary data from 2020 to 2024, evaluates performance using financial ratios such as Return on Assets (RoA), Return on Equity (RoE), Net Interest Margin (NIM), and Cost to Income Ratio (CIR). One-way ANOVA was used to analyze differences in e-banking indicators and operational efficiency. The results show significant differences in several electronic payment indicators and business metrics, particularly NIM and CIR. The study provides insights into how private banks use digital banking to improve financial performance, operational efficiency, and competitiveness in the digital era.

Keywords: E-Banking, Digital Payment Indicators, Operational Efficiency, Private Sector Banks

1. Introduction

India's banking sector has undergone major changes recently due to new technologies. A significant development is the growth of digital payment systems, which have changed how banks operate and interact with customers. Key indicators like ATMs, PoS terminals, NEFT, RTGS, mobile banking, and credit/debit card usage are now essential for assessing banks' technological readiness and service efficiency. In the future, AI, machine learning, and blockchain are expected to improve personalized customer experiences, enhance fraud detection, and transform transaction security and transparency. Banks focus on creating seamless, user-friendly platforms for tech-savvy clients. Digital transformation is especially clear in India's private sector banks, which have invested in digital infrastructure to improve efficiency. Banks like AB, HB, ICB, IDB, and KMB are leading this change. They use technology to lower transaction costs, enhance service delivery, and boost customer engagement. Advanced analytics and AI-driven insights allow these banks to offer customized

financial products and services, building customer loyalty and staying competitive in a rapidly evolving global financial market.

Operational efficiency in banking refers to maximizing output while minimizing input and costs. Key metrics such as Return on Assets (RoA), Return on Equity (RoE), Net Interest Margin (NIM), and the Cost-to-Income Ratio (CIR) reflect a bank's financial health and the effectiveness of its digital channels in streamlining operations and enhancing profitability. By optimizing these metrics, banks can achieve greater profitability and sustainability. For example, automation and digitalization reduce operational costs, allowing banks to allocate resources more effectively, enhance their competitive edge, and remain resilient in a technology-driven financial sector. Given the strategic importance of digital payment mechanisms in bank performance, this study investigates the relationship between digital payment indicators and operational efficiency in select private sector banks in India. By analyzing data from Axis, HDFC, ICICI, IDBI, and KMB from 2020 to 2024,

this research aims to provide empirical insights into how E-banking indicators influences the operational efficiency of select private sector banks.

2. Review of Literature

Digital banking's impact on enhancing commercial banks' operational and financial performance has garnered increasing scholarly attention. Bangarwa and Roy (2023) developed a dynamic data envelopment analysis model to assess operational performance, emphasizing efficiency improvements through advanced management frameworks. Gitau (2014) and Mugambi (2022) examined the influence of agency and digital banking on commercial banks in Kenya, highlighting positive correlations between online channels and financial efficiency. Similarly, Abdullai and Micheni (2018) found that internet banking significantly improved operational performance among banks in Nakuru County, Kenya.

Expanding on branch-level dynamics, Herrera-Restrepo et al. (2016) applied multivariate and clustering methods to assess bank branches' operational performance, suggesting robust metrics for efficiency analysis. In a global context, Isa et al. (2021) and Wijayanti et al. (2021) reported that digital banking innovations have positively influenced operational and financial performance in the Middle East and Southeast Asia, respectively. These findings are echoed by Chindudzi et al. (2020), who demonstrated that digital banking improved cost efficiency and customer service delivery in Zimbabwe.

Rabiu et al. (2019) analyzed Nigerian banks and affirmed the role of e-banking in boosting operational efficiency, while Shaikh and Anwar (2023) studied the Indian banking sector and showed that digital transaction volume positively correlates with bank performance metrics like RoA and RoE. Additionally, Laksana et al. (2023) investigated digital banking operational risks and their effects on bank service delivery.

From a user experience perspective, Mbama et al. (2018) found that customer satisfaction with digital platforms is a critical driver of financial performance, as perceived by UK bank managers. This is supported by Wadesango and Magaya (2021), who reviewed literature emphasizing the impact of digital banking services on service quality and profitability in the commercial banking sector. In East Africa, Uwimpuhwe and Twesigye (2024) studied the use of electronic banking tools in Rwanda and concluded that digital tools enhanced operational efficiency at the Bank of Kigali. Likewise, Mateka et al. (2016) affirmed the positive impact of internet banking on financial performance among listed banks in Kenya. Ngungi (2013) earlier concluded that online banking services are key contributors to improved bank profitability. Bueno

et al. (2024) provided a thematic review of digitization's impact on banking operations, proposing a forward-looking research agenda that includes AI and analytics. Boateng (2020) provided empirical evidence from Ghana that digital banking enhances profitability by lowering operational costs and increasing transaction volumes.

Research Gap

Although much research has been done on the impact of digital banking on financial performance, most studies focus on customer satisfaction, adoption behavior, or broad financial outcomes. Few studies analyze how specific e-banking tools, like ATMs, point-of-sale terminals, NEFTs, and RTGSs, affect the operational efficiency of Indian banks. Understanding operational efficiency is crucial because it directly impacts a bank's profitability and competitiveness. By analyzing how specific e-banking tools contribute to or hinder efficiency, banks can optimize their processes and allocate resources more effectively. This focus can lead to enhanced customer experiences, reduced costs, and improved financial performance in the long run. Metrics like Return on Assets (RoA), Return on Equity (RoE), Net Interest Margin (NIM), and Cost to Income Ratio (CIR) are commonly used. Earlier studies used sector-wide data that overlooked the unique differences among prominent private banks such as AB, HB, ICB, IDB, and KMB.

Statement of problem

E-banking in India's private sector has advanced, but its impact on efficiency is uncertain. It has streamlined processes, reduced transaction time, and minimized errors. Automation has let employees focus on complex tasks. Yet, efficiency depends on how well these systems are used by banks and customers. As profitability faces challenges and competition intensifies, it's crucial to assess whether digital banking efforts are meeting their goals. The absence of detailed studies connecting specific e-banking metrics to operational performance leaves a significant void in both academic research and strategic decision-making.

Objectives

The following objectives are derived from the statement of the problem.

- To assess the e-banking indicators growth (ATMs, PoS, NEFT, RTGS, credit card, debit card, and mobile banking) in select private sector banks.
- To examine the select private sector bank's operational efficiency in terms of RoA, RoE, NIM and CIR.

Hypothesis

The following hypothesis are formulated in accordance to meet with the objectives.

H01: There are no mean differences in the growth of ATMs, PoS, NEFT, RTGS, Credit Card, Debit Card, Mobile Banking) of Axis, HDFC, ICICI, IDBI and KMB.

H02: There are no significant differences in the means of operating efficiency of Axis, HDFC, ICICI, IDBI and KMB.

3. Research Methodology

Table-3.1 : Research Methodology Overview

Component	Details
Research Design	Descriptive research design was chosen for its ability to provide an accurate depiction of the phenomena without inferring cause-effect relationships.
Nature of Study	Exploratory and empirical, based on secondary data.
Sources of Data	RBI data on Digital Payment Indicators, NPCI Annual Reports.
Population	All 21 Private Sector Banks in India (as per RBI list).
Sample Selection	Five Private Sector Banks selected: AB (AB), HB (HB), ICB (ICB), IDB (IDB), KMB (KMB) – based on largest branch presence across India.
Time Period of Study	5 Financial Years: 2020 to 2024.
Operational Efficiency Metrics	Return on Assets (ROA) = Net Income / Total Assets. Return on Equity (ROE) = Net Income / Shareholders' Equity Net Interest Margin (NIM) = (Interest Income - Interest Expenses) / Total Interest Earning Assets × 100. Cost to Income Ratio (CIR) = Operating Expenses / Total Income × 100
E-Banking Indicators Used	ATMs - Point of Sale (PoS) Credit Card Transactions (Volume & Value) - Debit Card Transactions (Volume & Value) - NEFT (Inward & Outward Volumes/Values) - RTGS (Inward & Outward Volumes/Values) - Mobile Banking (Volume & Value)
Statistical Tools Applied	Descriptive Statistics: Mean, Standard Deviation - Inferential Statistics: One-Way ANOVA (to identify significant mean differences among banks at 5% level of significance)

4. Results and Discussions

The following section discuss the results of H01 and H02 of E-Banking indicators and Operational Efficiency of Axis, HDFC, ICICI, IDBI and KMBs.

- E-Banking Indicators of Select Private Sector Banks

Table – 4.1: E-banking Indicators – ATMs, PoS, Credit Card and Debit Card Transactions

E-Banking Indicators	Bank	N	Mean	Std. Deviation	F	Sig.
ATMs	AB	5	15963.35	580.281	141.333	.000
	HB	5	17723.40	3099.102		
	ICB	5	16742.80	96.505		
	IDB	5	3346.40	81.843		
	KMB	5	2838.00	321.003		
	Total	25	11322.79	7005.084		
PoS	AB	5	1139890.00	543313.760	16.340	.000
	HB	5	1207224.40	378234.670		
	ICB	5	1185813.00	394576.903		
	IDB	5	23272.80	6446.512		
	KMB	5	58274.40	20211.377		
	Total	25	722894.92	650233.688		
CC Volume	AB	5	32005991.60	18705456.019	14.441	.000
	HB	5	60725936.60	24727084.585		
	ICB	5	49906689.20	13345383.275		
	IDB	5	114337.40	14125.420		
	KMB	5	8618149.00	5163034.427		
	Total	25	30274220.76	27489419.153		
CC Value	AB	5	92267840.97	91184756.991	3.560	.024
	HB	5	226639181.20	211588953.095		
	ICB	5	191981367.20	119323293.241		
	IDB	5	439290.40	555546.308		
	KMB	5	30914346.80	30650400.782		
	Total	25	108448405.31	139564802.910		
DCVol	AB	5	26690220.20	18343202.243	5.489	.004
	HB	5	49409672.20	24718425.276		
	ICB	5	28502188.40	17002512.139		
	IDB	5	6513474.60	5169455.441		
	KMB	5	11212310.80	6019258.576		
	Total	25	24465573.24	21316021.083		

DCValue	AB	5	22153381.20	16340188.556	4.502	.009
	HB	5	52858879.40	41699735.877		
	ICB	5	44115576.40	23970940.686		
	IDB	5	3034142.20	2478921.724		
	KMB	5	8652963.60	6403053.394		
	Total	25	26162988.56	28848322.304		

The data in Table 4.1 highlights a comparative analysis of E-Banking Indicators—ATMs, PoS terminals, credit card volume and value, and debit card volume and value—across five private sector banks: Axis Bank (AB), HDFC Bank (HB), ICICI Bank (ICB), IDBI Bank (IDB), and Kotak Mahindra Bank (KMB) over five years. The analysis focuses on mean values, standard deviations, and ANOVA F-test results to determine if differences among banks are statistically significant.

ATMs: HB has the highest average number of ATMs (17,723.40), followed by ICB (16,742.80) and AB (15,963.35). IDB and KMB have significantly fewer ATMs, with averages of 3,346.40 and 2,838.00, respectively. The F-value (141.333) and p-value (0.000) confirm a highly significant difference in ATM deployment across banks.

Point of Sale (PoS) Terminals: PoS transactions show notable variation, with HB leading (1,207,224.40), followed by ICB and AB. IDB and KMB have the lowest mean PoS volumes. The F-value (16.340) and p-value (0.000) indicate significant differences in PoS infrastructure and usage among the banks.

Credit Card Transactions – Volume and Value: HB (60.73 million) and ICB (49.90 million) record high credit card volumes, while IDB’s average (114,337) reflects its limited presence in the credit card market. Similarly, HB and ICB lead in credit card transaction value, with IDB trailing significantly. The F-values (14.441 for volume, 3.560 for value) and p-values (0.000 and 0.024) confirm significant differences in credit card usage across banks.

Debit Card Transactions – Volume and Value: HB has the highest average debit card volume (49.4 million), followed by ICB and AB, while IDB and KMB lag behind. A similar trend is observed in debit card transaction value, with HDB and ICB leading significantly. The F-values (5.489 for volume, 4.502 for value) and p-values (0.004 and 0.009) indicate significant variation in debit card usage among banks.

Table -4.2: E-Banking indicators – RTGS, NEFT and Mobile Banking

Digital Payment Indicators	Bank	N	Mean	Std. Deviation	F	Sig.
NEFT Inward Vol	AB	5	100162398.00	118221759.815	2.222	.103
	HB	5	42862851.00	10486577.154		
	ICB	5	36856280.60	11847708.438		
	IDB	5	15640162.80	14686531.479		
	KMB	5	9840581.40	1504448.987		
	Total	25	41072454.76	58967818.331		
NEFT Inward Value	AB	5	23318420.80	10463617.142	8.680	.000
	HB	5	33573471.60	7571215.082		
	ICB	5	24532295.01	7458663.719		
	IDB	5	9546476.80	10619661.379		
	KMB	5	7963926.40	1732356.326		
	Total	25	19786918.12	12418780.731		
NEFT Outward Vol	AB	5	18993186.40	5970124.706	4.787	.007
	HB	5	37987021.00	16788660.749		
	ICB	5	26531942.20	8237149.775		
	IDB	5	11642468.60	10624337.610		
	KMB	5	14722219.60	9125999.271		
	Total	25	21975367.56	13773584.569		
NEFT Outward Value	AB	5	20819507.60	9437823.554	9.384	.000
	HB	5	39796445.80	12837248.035		
	ICB	5	25918826.63	7347420.121		
	IDB	5	9734215.00	10970698.829		
	KMB	5	8896710.40	2305887.518		
	Total	25	21033141.09	14417554.066		
RTGS Inward Vol	AB	5	1489015.53	436766.229	21.424	.000
	HB	5	3605590.20	997935.401		
	ICB	5	2112136.20	750054.621		
	IDB	5	395633.20	58209.858		
	KMB	5	895062.80	233709.576		
	Total	25	1699487.59	1261672.523		
RTGS Inward Val	AB	5	974120.76	324645.850	32.732	.000
	HB	5	2203477.11	514663.089		
	ICB	5	1252750.88	342227.961		
	IDB	5	237808.40	39132.241		
	KMB	5	288898.00	85841.342		
	Total	25	991411.03	790065.608		

RTGS Outward Vol	AB	5	1312033.48	486207.542	17.542	.000
	HB	5	3103077.71	964479.964		
	ICB	5	1990331.83	645203.830		
	IDB	5	348901.20	74300.022		
	KMB	5	872790.00	191047.109		
	Total	25	1525426.85	1104983.461		
RTGS Outward Val	AB	5	1010610.55	296735.082	35.678	.000
	HB	5	2394460.96	569026.534		
	ICB	5	1290030.17	354762.253		
	IDB	5	218979.20	33153.133		
	KMB	5	304569.60	80608.573		
	Total	25	1043730.10	859874.457		
Mobile Banking Vol	AB	5	639943948.80	281370711.360	4.190	.013
	HB	5	651705144.26	395914644.905		
	ICB	5	351374227.00	197124045.950		
	IDB	5	84713715.40	51678032.572		
	KMB	5	314152263.80	255372319.640		
	Total	25	408377859.85	323987688.538		
Mobile Banking Value	AB	5	1662626680.80	581544508.468	5.944	.003
	HB	5	2219205108.80	1195132493.284		
	ICB	5	1949034675.20	952859777.867		
	IDB	5	211167631.60	115463778.621		
	KMB	5	850793176.80	456071668.629		
	Total	25	1378565454.64	1027822410.267		

The data in Table 4.2 compares key E-Banking Indicators—NEFT (inward and outward volume and value), RTGS (inward and outward volume and value), and Mobile Banking (volume and value)—across five major private sector banks in India: AB, HB, ICB, IDB and KMB based on five-year observations. The analysis focuses on mean values, standard deviations, and ANOVA test results to determine whether differences across banks are statistically significant.

NEFT Transactions (Inward and Outward):

- Inward Volume: AB has the highest average (100.16 million) but with significant fluctuations. HB and ICB follow with more stable volumes, while IDBI and Kotak Mahindra report lower averages. The differences are not statistically significant (F = 2.222, p = 0.103).

- Inward Value: HB leads with the highest average transaction value (₹33.57 crore), followed by Axis and ICB. IDB and KMB report smaller values, indicating limited NEFT reach. The differences are significant (F = 8.680, p = 0.000).
- Outward Volume: HB leads (37.98 million), with Axis and ICICI showing notable activity. IDB and KMB lag behind. The differences are statistically significant (F = 4.787, p = 0.007).
- Outward Value: HB again leads (₹39.79 crore average), followed by ICICI and Axis. IDB and KMB report significantly lower values. The differences are highly significant (F = 9.384, p = 0.000).

RTGS Transactions (Inward and Outward):

- Inward Volume: HB leads (3.61 million), followed by ICB and AB. IDB shows the least usage (395,633 transactions). The differences are highly significant (F = 21.424, p = 0.000).
- Inward Value: HB dominates (₹22.03 lakh crores average), while IDBI and Kotak are the smallest players. The differences are strongly significant (F = 32.732, p = 0.000).
- Outward Volume: HB leads (3.10 million), with IDB and KMB showing minimal volumes. The differences are highly significant (F = 17.542, p = 0.000).
- Outward Value: HB has the highest transaction value (₹23.94 lakh crores), while IDB reports the lowest (₹2.19 lakh crores). The differences are statistically significant (F = 35.678, p = 0.000).

Mobile Banking:

- Volume: HDFC (651.70 million) and AB (639.94 million) lead, showing strong digital transaction bases. ICICI also shows healthy volumes, while IDBI lags significantly (84.71 million). The differences are statistically significant (F = 4.190, p = 0.013).
- Value: HB leads with ₹22,192 crores, followed by ICICI and Axis. IDB lags significantly with ₹2,111 crores. The differences are strongly significant (F = 5.944, p = 0.003).
- Operational Efficiency of Axis, HDFC, ICICI, IDBI and KMBs.

In this section, all the measures of operational efficiency are compared among the select private sector banks during the study period of 2020 – 2024. These operational efficiencies are RoA (%), RoE (%), NIM (%) and Cost to Income Ratio (%). The following hypothesis is formulated and tested with ANOVA one way at LoS =5%.

H02: There is no mean difference in the Operational Efficiency of Axis, HDFC, ICICI, IDBI and KMBs.

Return on Assets (%)**Table –4.3: Return on Assets (%) of Axis, HDFC, ICICI, IDBI and KMBs.**

Year	Axis	HDFC	ICICI	IDBI	Kotak Mahindra	F-value	p-value	Results
2020	0.178	1.716	0.722	-4.297	1.651	2.722	0.059	Accept H0.
2021	0.661	1.781	1.316	0.457	1.816			
2022	1.108	1.787	1.654	0.809	1.996			
2023	0.727	1.789	2.013	1.103	2.233			
2024	1.683	1.681	2.185	1.551	2.296			
Mean	0.871	1.751	1.578	-0.075	1.998			
S.D	0.561	0.049	0.584	2.394	0.273			
C.V	64.423	2.822	37.017	-3174.816	13.648			

The Return on Assets (RoA) performance from 2020 to 2024 across five major banks, HDB, ICB, IDB, and KMB—provides insights into their asset efficiency and profitability. KMB had the highest average RoA of 1.998% with a low standard deviation of 0.273, resulting in a coefficient of variation (C.V.) of 13.648. This indicates strong and stable profitability. HB followed with a mean RoA of 1.751% and the lowest variability (S.D. = 0.049, C.V. = 2.822), reflecting exceptional stability and efficient use of assets. ICB improved its mean RoA to 1.578% with

a C.V. of 37.017, showing moderate stability and progress in asset utilization. AB, with a mean RoA of 0.871% and a high C.V. of 64.423, showed high volatility in returns and lower efficiency compared to peers. IDB had a negative mean RoA of -0.075% and an extremely high C.V. due to a significant loss in 2020. Despite improving to 1.551% in 2024, its initial deficit influenced its overall performance. Considering, the F – Value (2.722) and p-value (0.059) indicates that there is no significant difference in the RoA among the select private sector banks.

- Return on Equity**

Table – 4.4: Return on Equity (%) of Axis, HDFC, ICICI, IDBI and KMBs.

Year	Axis	HDFC	ICICI	IDBI	Kotak Mahindra	F-value	p-value	Results
2020	1.916	15.356	6.807	-37.877	12.133	2.426	0.082	Accept H02
2021	6.485	15.274	10.977	3.693	10.929			
2022	11.309	15.395	13.688	5.855	11.826			
2023	7.638	15.742	15.891	8.043	13.098			
2024	16.458	13.813	17.151	11.295	14.249			
Mean	8.761	15.116	12.903	-1.798	12.447			
S.D	5.455	0.750	4.137	20.363	1.271			
C.V	62.26	4.96	32.06	-1132.44	10.21			

The Return on Equity (RoE) data from 2020 to 2024 for AB, HB, ICB, IDB, and KMB highlights differences in shareholder value creation. HB had the highest mean RoE of 15.116%, with the lowest standard deviation (0.750) and coefficient of variation (C.V.) of 4.96. This reflects strong and stable returns with minimal volatility. KMB followed with a mean RoE of 12.447% and a low C.V. of 10.21, showing consistent performance with slight volatility. ICB's RoE rose from 6.807% in 2020 to 17.151% in 2024, resulting in a mean of 12.903% and a moderate C.V. of 32.06, indicating improved profitability despite some fluctuations. AB's RoE improved from 1.916% in

2020 to 16.458% in 2024, but its average RoE of 8.761% and high C.V. of 62.26 showed significant volatility. IDB had a negative mean RoE of -1.798% and a high C.V. of -1132.44, mainly due to a -37.877% RoE in 2020. Despite improving to 11.295% by 2024, past losses hindered consistency. Overall, HDFC and Kotak Mahindra showed stable equity utilization, ICICI improved steadily, Axis displayed volatility, and IDBI, despite recovery, was the most inconsistent. The computed value of $F=2.426$ and $p=0.082$ shows that there is no significant difference in the RoE among select banks. Hence, Accept H_0 under the study.

• Net Interest Margin (%)

Table -4.5: NIM (%) of Axis, HDFC, ICICI, IDBI and Kotak Mahindra Banks.

Year	Axis	HDFC	ICICI	IDBI	Kotak Mahindra	F-Value	p-value	Results
2020	3.770	3.670	3.029	2.326	3.75	3.866	0.017	Reject H_0
2021	3.530	3.710	3.169	2.86	4.00			
2022	3.470	3.480	3.363	3.039	3.92			
2023	4.020	3.520	3.922	3.458	4.4			
2024	4.620	3.000	3.97	3.906	4.33			
Mean	3.882	3.476	3.491	3.118	4.080			
S.D	0.466	0.283	0.433	0.599	0.276			
C.V	12.01	8.14	12.39	19.22	6.77			

The Net Interest Margin (NIM) data for AB, HB, ICB, IDB, and KMB from 2020 to 2024 reflect each bank's efficiency in generating interest income relative to their interest-earning assets. KMB recorded the highest average NIM of 4.080%, supported by a low standard deviation of 0.276 and the lowest coefficient of variation (C.V.) at 6.77%, indicating strong and consistently stable interest margins over the last five years. This showcases Kotak's robust interest income management and efficient lending practices. AB followed with a mean NIM of 3.882% and a moderate standard deviation (0.466) and C.V. of 12.01%. The bank showed a notable improvement from 3.47% in 2022 to 4.62% in 2024, suggesting growing profitability from its core banking operations. ICB had a mean NIM of 3.491%, with a standard deviation of 0.433 and a C.V. of 12.39%. Though slightly lower than Axis and Kotak

in terms of average margin, ICICI showed consistent growth in NIM, rising steadily from 3.029% in 2020 to 3.97% in 2024. This reflects progressive enhancements in lending efficiency. HB had a mean NIM of 3.476% with a very low standard deviation (0.283) and C.V. of 8.14%, indicating high interest margin stability, high interest margin stability. However, its NIM declined in recent years, reaching 3.00% in 2024. This may point to increased costs of funds or competition in lending rates. IDB, while showing significant improvement from 2.326% in 2020 to 3.906% in 2024, had the lowest average NIM at 3.118% and the highest variability (C.V. of 19.22%). This suggests increased fluctuation and volatility in interest margin, likely due to changing asset quality and restructuring strategies. Based on the F-value (3.866) and p-value (0.017), reject the H_0 .

- **Cost to Income Margin Ratio**

Table – 4.6: Comparison of Cost to Income Margin Ratio (%) of Axis, HDFC, ICICI, IDBI and Kotak Mahindra Banks.

Year	Axis	HDFC	ICICI	IDBI	Kotak Mahindra	F-Value	p-value	Results
2020	22.130	14.470	23.690	25.05	27.40	15.316	0.000	Reject H ₀
2021	23.410	14.420	21.980	24.64	26.58			
2022	28.580	15.140	25.490	27.66	33.3			
2023	39.000	15.510	25.470	28.33	33.36			
2024	26.710	12.460	23.600	27.32	29.75			
Mean	27.966	14.400	24.046	26.600	30.078			
S.D	6.681	1.178	1.475	1.649	3.189			
C.V	23.89	8.18	6.14	6.20	10.60			

The Cost to Income Ratio (%) is a critical indicator of a bank's operational efficiency, measuring how much a bank spends to earn its income. The comparative analysis of AB, HB, ICB, IDB, and KMB over the period 2020–2024 reveals significant differences in performance. From the data, KMB reported the highest mean cost to income ratio at 30.078%, followed by AB (27.966%), IDB (26.600%), ICB (24.046%), and HB (14.400%). This indicates that HB is the most cost-efficient among the five, spending the least in proportion to its income. The standard deviation (SD) and coefficient of variation (C.V.) further underline performance consistency. HB showed the lowest standard deviation (1.178) and C.V. (8.18%), indicating stable and efficient cost management. In contrast, AB had the highest variability, with a standard deviation of 6.681 and C.V. of 23.89%. This reflects less consistent efficiency in managing operational costs. Importantly, the F-value of 15.316 and p-value of 0.000 in the ANOVA test demonstrate that there is a statistically significant difference in the cost to income ratios among the banks. Therefore, H₀₂ is rejected.

5. Findings and Conclusions

Findings

- **ATMs and PoS:** Significant differences were observed in ATM deployment and PoS terminal usage. HDFC, Axis, and ICICI had higher infrastructure and utilization levels compared to IDBI and KMB.
- **Card Transactions:** HDFC and ICICI dominated credit and debit card volumes and values, while IDBI exhibited minimal engagement in card-based transactions.

- **NEFT and RTGS:** HB consistently recorded the highest values and volumes across both NEFT and RTGS channels, reflecting their superior digital transaction capacity. Significant differences were found in outward NEFT and RTGS usage across banks.
- **Mobile Banking:** HDFC and Axis led in both volume and value of mobile banking, with statistically significant interbank differences noted.

Operational Efficiency:

- **RoA and RoE:** No statistically significant differences, though HDFC and Kotak Mahindra displayed strong and consistent performance.
- **NIM:** Significant differences existed; Kotak Mahindra had the highest and most stable NIM, indicating efficient interest income management.
- **CIR:** Significant disparities were observed; HB had the lowest and most stable CIR, indicating superior cost control.

Conclusions

Digital banking tools play a crucial role in enhancing operational efficiency in India's private banking sector. The study reveals that private sector banks differ significantly in how effectively they deploy and utilize digital channels. While HDFC, ICICI, and Axis demonstrate superior digital infrastructure and performance, IDBI lags behind. Notably, banks with higher digital engagement, especially in NEFT, RTGS, and mobile banking, tend to exhibit better NIM and CIR metrics. This implies that operational efficiency is

positively correlated with the effective use of digital banking indicators. Therefore, investments in digital infrastructure and transaction capabilities contribute directly to improved bank performance.

Limitations

Data Limitation: The study is based solely on secondary data from 2020 to 2024, which may not reflect the most recent developments or real-time operational challenges.

Bank Selection: Only five private sector banks were analyzed, limiting the generalizability of findings across all Indian banks.

Quantitative Focus: The analysis is purely quantitative; qualitative factors like customer satisfaction, cybersecurity readiness, and staff digital literacy were not considered.

Macro Factors Ignored: Broader economic conditions, regulatory changes, and pandemic-related disruptions that may have influenced performance were not explicitly controlled.

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