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Review

Financial Inclusion and Its Ripple Effects on Socio-Economic Development: A Comprehensive Review

Deepak Mishra [1], Vinay Kandpal [2,3,*], Naveen Agarwal [4] and Barun Srivastava [1,5]

[1] School of Business, UPES, Dehradun 248007, India; deepak.107510@stu.upes.ac.in (D.M.); barun.2189@gmail.com (B.S.)
[2] Department of Management Studies, Graphic Era Deemed to Be University, Dehradun 248002, India
[3] Graduate Program in Business Administration, Paulista University, UNIP, São Paulo 04026-002, Brazil
[4] Centre for Continuing Education (UPESON), UPES, Dehradun 248007, India; naveen.agarwal@ddn.upes.ac.in
[5] School of Commerce, Graphic Era Hill University, Dehradun 248002, India
* Correspondence: vinayaimca@gmail.com

Abstract: This study provides an overview of the different dimensions of financial inclusion, its socioeconomic impacts on society's sustainable development, and future research agendas. Initially, 620 studies were identified using Scopus and other databases, employing keywords such as financial literacy, financial inclusion, financial capability, women's empowerment, fintech, artificial intelligence, financial accessibility, sustainable development goals, and economic growth. After refinement based on focus and relevance, 325 papers were analyzed in detail for review, primarily focused on India and emerging economies. This review highlights that access to finance by untouched segments of society is essential for sustainable and socio-economic development in developing economies. The official banking system, an effort by the government to assist the financially disadvantaged, can incorporate the impoverished into a formal financial system through campaigns and credit system reforms. Socioeconomic programs reinforce one another and foster the development of children, women, families, and society. This research paper undertakes a systematic literature review primarily focused on relevant articles in broad areas of financial inclusion and its impact analysis and offers a valuable agenda for future research.

Keywords: financial inclusion; systematic review; banking; financial services; sustainable development; women empowerment

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1. Introduction

The ability of people and businesses to obtain practical and reasonably priced financial products and services that satisfy their needs—transactions, payments, savings, credit, and insurance—delivered in an ethical and sustainable manner is known as financial inclusion. It is seen as a major force behind financial well-being and economic growth (Sapre 2023). According to recent research, financial inclusion is a multifaceted concept that includes having and using financial goods, such as mobile money accounts, as well as risk management (insurance), savings accounts, credit availability, and receiving remittances (Koomson and Ibrahim 2018; Koomson et al. 2020). According to the World Bank's Global Financial Database 2017, a sizable portion of the population remains financially excluded (Demirguc-Kunt et al. 2018). The emergence of financial inclusion as a prime development challenge has attracted researchers and policymakers worldwide (Alliance for Financial Inclusion 2019; Han and Melecky 2013). However, 31 percent of the world's population does not have access to an organized financial system (Demirguc-Kunt et al. 2018). BRICS alone accounts for half of that, India and China account for 32 percent, Brazil accounts for 2.4%, South Africa accounts for 0.5%, and Russia accounts for less than 0.5%. For women (+15 age) in India, the participation further drops to 43 percent. Just 6 percent of the total population in India borrowed from a formal financial institution in 2014 compared to 10 percent in other BRICS economies. Furthermore, India had just 18 ATMs per 100,000 adults in 2014, compared to over 65 in South Africa and 180 in Russia. Only approximately 10 percent of adults (+15 age) used ATM cards for payments compared to 40 percent in South Africa. Moreover, formal saving and borrowing remained extremely low. Only 53 percent of individuals (+15 years) hold accounts with formal financial institutions (Reserve Bank of India 2015). Financial Inclusion helps in improving accessibility to financial products and services, such as payments, insurance, loans, and others (Babajide et al. 2015; Asongu et al. 2020). The provision of practical and reasonably priced financial services and products (such as credit, insurance, savings, and payments) that meet the requirements of individuals and companies in an ethical and long-term way is known as financial inclusion (World Bank 2018).

Providing banking and financial services at a reasonable price is important in areas where the interaction between formal economic systems and individuals (such as homes or businesses) is limited. It is risky to promote digital finance as a pro-development financing tool for reducing poverty for two reasons: first, the wealthy can more easily transfer or mitigate the risks associated with using digital finance platforms by purchasing insurance, while the impoverished lack the resources to do so (Koh et al. 2018; Ozili 2020). In addition, financial services availability provides a possible balanced consumption, plans recurring expenses effectively, and meets some emergency requirements (Babajide et al. 2015; Lauer and Lyman 2015). Financial inclusion encompasses a number of elements, such as availability, expansion usage, and impediments to financial services. A significant body of work is available to present the determinants of financial inclusion in India. For instance, branch networks (Kumar 2013), self-help groups and education (Bhanot et al. 2012); socioeconomic factors (Clámara et al. 2014; Rastogi and Ragabiruntha 2018); domestic agriculture to gross domestic product (GDP), literacy ratio, population density, and urbanization (Yadav and Sharma 2016); economic growth (Sharma 2016); bank branch quantity, and credit deposit ratio on GDP (Iqbal and Sami 2017); infrastructure (Sharma et al. 2018); poverty and inequality (Erlando et al. 2020); and social safety (Didenko et al. 2020). People are being helped to escape poverty and are being connected to economic opportunities through formal financial services, including those that may be accessed over the phone. It might be challenging for the impoverished to save money for future companies or educational investments without a savings account. A crop disaster without insurance could leave farmers and their families penniless (Klapper et al. 2016).

The literature shows that banks are the most significant drivers of the financial inclusion process in India. Information technology and communication led to financial services, and Jan Dhan-Aadhaar's mobile and essential infrastructure presence substantially affected the general conduct of financial inclusion. Many such services that are performed in India were either region-specific or an element of a broader set of proxies was lacking (Malik et al. 2020). Financial inclusion is considered a critical element in poverty reduction and economic growth policies. Some reported instances of financial inclusion success in developing nations are associated with the use of branchless banking enabled by information and communication technologies (Diniz et al. 2012). Financial technology (fintech) has upended the conventional financial system by decoupling, decentralizing, and demystifying finance. However, effective and scalable fintech adoption is essential for financial inclusion and value creation through new business models. While theoretical frameworks and models in the literature investigate technology adoption generally, there is no measurement methodology for fintech-specific customer readiness (Mahmud et al. 2023). In the insurance industry, artificial intelligence and machine learning are also widely used, particularly in risk assessment and claims reserving (Chukhrova and Johannssen 2021; Pnevmatikakis et al. 2021). The digital age and the introduction of financial technologies have enabled access to different financial products and services with a single click. However, little research to date has examined the relationship between the use of these new technologies and financial literacy (Andreou and Anyfantaki 2021). The concept of financial inclusion, which entails the accessibility and effective use of financial services, has been increasingly recognized as a pivotal factor in socio-economic development. Despite substantial progress in this area, there remains a discernible gap in our understanding of the broader, systemic impacts of financial inclusion, particularly its 'ripple effects' on various socio-economic dimensions. Existing research predominantly focuses on the direct benefits of financial inclusion, such as enhanced financial security and poverty reduction (Demirguc-Kunt et al. 2018). However, the indirect effects, which might be equally significant, are not as thoroughly examined. This paper seeks to address this gap by posing the following research question: Beyond its immediate economic benefits, how does financial inclusion contribute to broader socio-economic development? This inquiry is vital, as it extends the understanding of financial inclusion beyond individual financial well-being to encompass wider societal and economic implications. It aligns with the call by (Park and Mercado 2018) for a deeper exploration of the long-term developmental impacts of increased access to financial services.

The relevance of this research question is further emphasized by studies like (Allen et al. 2016), who explore the relationship between financial inclusion and economic growth, hinting at a broader socio-economic impact yet leaving room for more detailed analysis. Moreover, Demirguc-Kunt et al. (2018) offer extensive data on financial inclusion but do not fully delve into its indirect socio-economic effects, presenting an opportunity for further investigation.

This paper aims to bridge this gap by providing a comprehensive review of the indirect effects of financial inclusion on socio-economic development. By doing so, it not only contributes to the academic discourse by synthesizing existing research but also identifies potential areas for future research, thereby enhancing the understanding of the multi-faceted role of financial inclusion in global development.

Financial inclusion and socioeconomic development are intricately linked, with numerous studies and literature highlighting how improved access to financial services can significantly contribute to various aspects of socioeconomic development. Below is a detailed explanation supported by the relevant literature:

Poverty Alleviation: Financial inclusion is crucial in reducing poverty, a key aspect of socioeconomic development. By providing the unbanked and underbanked populations with access to basic financial services such as savings accounts, credit, insurance, and payment services, financial inclusion enables individuals to save, invest, and protect themselves against financial risks. This empowerment leads to an increase in household income and consumption, contributing to poverty reduction. The World Bank's Global Findex Database provides extensive data on how financial inclusion is a key enabler for reducing poverty and boosting shared prosperity. The theoretical and conceptual underpinnings connecting financial inclusion to socioeconomic development attributes revolve around several key ideas:

Access to Financial Services: Financial inclusion implies that individuals and businesses have access to useful and affordable financial products and services that meet their needs—transactions, payments, savings, credit, and insurance—delivered in a responsible and sustainable way. This access is crucial for spurring economic growth, reducing poverty, and boosting prosperity.

Economic Growth: Financial inclusion is also linked to economic growth. By bringing more people into the formal financial system, it increases the pool of available capital for investment, which is crucial for economic growth. Studies have shown that when individuals and businesses have access to financial services, they can invest more in their operations, increase productivity, and contribute to overall economic growth. A report by the International Monetary Fund (IMF) highlights the positive impact of financial inclusion on economic growth.

Gender Equality: Financial inclusion plays a significant role in promoting gender equality, another important attribute of socioeconomic development. Women, who have traditionally been excluded from formal financial systems, gain more control over their finances and economic decisions when they have access to financial services. This empowerment leads to improvements in family well-being and education and promotes gender equality. The World Bank and various gender-focused studies emphasize the role of financial inclusion in empowering women.

Financial Literacy and Education: Improved financial inclusion often goes hand-in-hand with increased financial literacy. People who are newly included in the financial system gain knowledge about managing money, saving, investing, and understanding credit. This education is a critical component of socioeconomic development as it enables individuals to make informed financial decisions. The OECD has published several reports on the importance of financial literacy for socioeconomic development.

Entrepreneurship and Job Creation: Financial inclusion supports entrepreneurship by providing individuals with access to credit and other financial services necessary to start and grow businesses. This leads to job creation, another key element of socioeconomic development. The International Labour Organization (ILO) and other studies have documented the positive correlation between financial inclusion, entrepreneurship, and job creation.

Social Stability and Reduced Inequality: By providing financial services to the lower-income and marginalized segments of society, financial inclusion helps reduce income inequality and promote social stability. Access to affordable financial services enables these groups to improve their living standards and contribute more significantly to the economy. The United Nations Development Programme (UNDP) has recognized the role of financial inclusion in achieving the Sustainable Development Goals, particularly in reducing inequality.

Innovation in Financial Services: The drive for financial inclusion spurs innovation in financial services, particularly in digital financial services like mobile banking. This innovation not only makes financial services more accessible but also more affordable, further enhancing socioeconomic development. Studies on the impact of mobile money services in various countries provide evidence of this relationship.

Women's Empowerment: Financial inclusion often leads to women's economic empowerment by giving them control over financial resources, which enhances their economic participation and decision-making power in households and communities.

Financial inclusion is a powerful catalyst for socioeconomic development, influencing various aspects such as poverty reduction, economic growth, gender equality, financial literacy, entrepreneurship, social stability, and innovation in financial services. The literature from World Bank, IMF, OECD, ILO, UNDP, and other reputable organizations provides ample evidence and insights into these connections.

Policymakers have mixed opinions about the program's success and financial inclusion. "Existing research about a marketing mix of services in the financial services industry is contradictory and confusing" (Paul et al. 2016). The current marketing framework of the banking structure is not helpful and should be restructured to use a range of accessible products. These outcomes also warrant a thorough review of the social and economic challenges of financial inclusion. Therefore, we undertake a novel systematic literature review (SLR) by analyzing publications in reputed journals to develop knowledge of financial inclusion and its socioeconomic advancement and provide further research agenda. This paper aims to shed light on the multi-dimensional impacts of financial inclusion on socio-economic development, examining both the benefits and the challenges, as well as the role of various stakeholders in facilitating this process. Based on the preceding discussions, we have formulated three focused research questions (RQs) to further explore the relationship between financial inclusion and socioeconomic development:

RQ1: Assessing Current Understanding and Knowledge: What is the current level of understanding and knowledge regarding the impact of financial inclusion on socioeconomic development? This question aims to evaluate the existing literature and studies to determine what is already known about how financial inclusion contributes to socioeconomic progress.

RQ2: Identifying Focus Areas for Socioeconomic Development: Which specific areas within socioeconomic development require more attention in the context of financial inclusion? This question seeks to identify the critical areas within socioeconomic development that are most influenced by financial inclusion and where focused efforts could yield significant benefits.

RQ3: Uncovering Research Gaps and Future Directions: What are the potential gaps in research and future directions for studying the relationship between financial inclusion and socioeconomic development? This question aims to pinpoint areas where further research is needed, identifying gaps in current knowledge, and suggesting future research directions to advance the understanding of how financial inclusion can drive socioeconomic development.

A systematic review of the literature on the various aspects of financial inclusion would help us expand existing knowledge on the assessment of financial inclusion and sustainable development. Financial inclusion is directly linked to several of the United Nations' Sustainable Development Goals (SDGs), especially those related to poverty eradication, gender equality, decent work, and economic growth.

An SLR provides comprehensive insights on how increasing access to financial services contributes to the broader goals of global development and poverty reduction. The structure of this paper includes Section 1 discussing the concept and the motivation behind the study. Section 2 discusses the methodology employed to conduct this research. Section 3 provides a theoretical context for financial inclusion, while Section 4 presents result from the literature on different themes or elements of financial inclusion. Section 5 presents the review's conclusion, and Section six presents the theoretical extension of financial inclusion and the scope of future research for inclusive growth globally.

2. Research Methods

A systematic literature review is carried out for this research paper, whose themes are sustainable development and financial inclusion. In systematic review researcher analyses, the research area covers a broad spectrum of available literature and lays down research questions that contribute to the knowledge (Tranfield et al. 2003).

Qualitative systematic reviews need to identify relevant qualitative evidence systematically. After the review collection, the studies are organized and analyzed. This research paper undertakes a systematic literature review that seeks and focuses primarily on relevant articles in broad areas of financial inclusion.

2.1. Journal Selection Criteria

The SLR technique uses the following five steps (Denyer and Tranfield 2009); the literature was scrutinized as per the issue identified above, utilizing a database. The researcher advised a set of guidelines, which was adopted for the SLR methodology in this paper. The literature was analyzed and synthesized to identify existing results, research orientations, and gaps. The articles were researched and separated from high-quality, high-impact journals indexed in electronic databases. It includes databases such as Scopus, Web of Science (WoS)/Social Science Citation Index (SSCI)/Journal Citation Report, which list academic journals with an impact factor (IF) for identifying potential sources for review (Paul et al. 2017). These are the world's premier databases for published articles and citations. When several hundred papers on a trending topic have already been published to be potentially reviewed, one can even rely upon JCR-indexed journals with an IF above a given threshold, i.e., 1.0 plus following, for instance, (Paul and Rosado-Serrano 2019). It includes publications in top-tier journals, and journals covering financial inclusion, financial literacy, women's empowerment, financial capability, fintech, and access to finance were considered for the systematic review. In order to allow researchers to begin to work in the field with a general understanding, an early SLR could provide a better-defined definition and understanding of the research field. In immature areas, review articles focus less on hypotheses or research questions and devote more attention to the synthesis of basic facts in a given area which provides valuable insight (Kraus et al. 2020).

2.2. Article Selection Criteria

This research started by researching and reviewing the available literature on a broad area of financial inclusion from 2012 to 2023. The keywords used in the study are financial inclusion, sustainable development, self-help groups, financial technology, financial literacy, financial exclusion, artificial intelligence, and financial capability. We refined the available papers by setting the review's scope to include empirical studies, and the theoretical perspective of financial inclusion and its other related areas were considered for review work. A systematic review article can be developed using 40–50 to 500 or more relevant papers. It was decided that terms should appear in the titles of articles, abstracts, or keywords. The search was performed on 2 August 2023. During the initial phase, 620 research articles were identified. After further refinement based on focus and relevance, 325 papers were analyzed in detail for review and classified according to the type of study primarily focused on India and emerging economies. This approach aligns with our goal of integrating a substantial amount of knowledge, spotting any gaps, and suggesting future directions for study (Kitchenham et al. 2009). SLR is a rigorous methodology that generates knowledge and pinpoints a field's future research subjects, routes, and trends (Tranfield et al. 2003). The review criteria are crucial in the systematic phase. The selected papers were and understood considering the relevance of the topic.

3. Theoretical Perspective

3.1. Socioeconomic Development Theory

Tinker (2001), discussed the increased measures undertaken for socioeconomic development to uplift weaker or underprivileged women in developing countries. Activists, practitioners, and academics engage in international development policies and programs.

3.2. Theory of Planned Behavior: Understanding Behavioral Predictions

The theory of planned behavior is a psychological framework that provides insight into how behavior can be predicted based on certain key factors. This theory posits that attitudes towards conduct, subjective norms, and perceived behavioral control are integral in predicting various forms of behavior. These elements, in conjunction with one's intentions and perceptions of control over the behavior, can account for a substantial portion of the variance in actual behavior (Ajzen 1991).

The theory suggests that these three factors lead to the formation of behavioral intentions. In other words, how much a person is willing to try, and how hard they plan to work towards performing the behavior. These intentions, coupled with perceptions of behavioral control, are key predictors of actual behavior.

The theory of planned behavior (TPB) is a valuable concept in promoting financial inclusion as it helps in understanding and influencing the behavioral intentions towards using financial services. By analyzing attitudes towards financial activities, the influence of social norms, and perceived control over financial decisions, the TPB can identify barriers to financial inclusion. It aids in designing interventions to change negative perceptions, leverage social influences, and enhance the perceived ease and accessibility of financial services. This approach is crucial for developing targeted financial products, policies, and educational programs that increase participation in financial systems, especially among underserved populations. Thus, the TPB offers a comprehensive framework to address psychological and social factors critical for effective financial inclusion strategies.

The TPB is used in retail (mortgage) lending, investor education, and financial counseling, among other areas of financial sector utility (Xiao 2008). In addition to the aforementioned, British consumers were also examined using the TPB to look into investment-based decisions (East 1993). Bansal and Taylor (2002) applied it to investigate the switching behavior on the sample of mortgage loan customers. Key factors that shape consumer behavior and intentions towards using mobile coupons are their attitudes and perceived behavioral control. In contrast, subjective norms do not show a clear influence. Within the 'behavioral attitude' category, perceived usefulness significantly impacts the attitude. Regarding 'subjective norms', the impact of the primary group is noticeable. Most importantly, under 'perceived behavioral control', self-efficacy emerges as the most influential factor (Hsu et al. 2006). The TPB helps in understanding the psychological and social factors that drive the use of financial services. By addressing these factors, interventions can be designed to enhance financial inclusion, such as through targeted financial education programs, community engagement strategies, and user-friendly financial service offerings. Understanding these behavioral predictors is crucial for developing policies and services that encourage wider participation in financial systems, particularly among underserved or excluded populations, thereby contributing to overall socio-economic development.

3.3. Technology Acceptance Model: Understanding Consumer Adoption of Technology

The technology acceptance model (TAM) is an essential theoretical framework that elucidates the process through which consumers adopt and use new technologies. This model, widely used in numerous research studies, explains that the decision-making process concerning the adoption and utilization of technology is influenced by various factors. The TAM's core value lies in its ability to help researchers and practitioners understand the reasons behind the acceptance or rejection of a technology. The TAM focuses on perceived usefulness and ease of use, which are critical in determining whether individuals will accept and continuously use technological solutions like mobile banking, online financial management tools, or digital payment systems. By understanding and enhancing these perceptions, financial institutions and policymakers can design and implement more user-friendly and beneficial financial technologies. This not only promotes wider financial inclusion, particularly among technologically underserved populations, but also contributes to socio-economic development by facilitating more efficient, accessible, and inclusive financial services, thereby improving economic activities, reducing transaction costs, and fostering financial empowerment.

The continuous evolution and integration of technology into both private and professional spheres raises an ongoing question: should a particular technology be accepted or rejected? Since its inception over a quarter-century ago, the Technology Acceptance Model has remained a dominant framework in the field of technology acceptance. It has become a key tool in understanding the predictors of human behavior in relation to the potential adoption or rejection of technological innovations. The TAM provides a comprehensive approach for analyzing the complex interplay of factors that influence technology adoption, making it an indispensable model for understanding and navigating the ever-changing landscape of technology in society (Marangunić and Granić 2015). While the TAM primarily focuses on the adoption of technology, its principles are highly applicable in understanding and enhancing the adoption of financial technologies, which is a critical aspect of financial inclusion and can have significant impacts on socio-economic development. Integrating the TAM in this context can provide a comprehensive understanding of how to effectively leverage technology to promote financial inclusion and, in turn, socio-economic growth.

4. Discussion

Financial inclusion is the most sought-after term. Existing gaps should be narrowed to ensure complete financial inclusion. All over the world, people are still struggling to close the gap and reach the unbanked. Access to financial programs and a better life are imperative for the poor and disadvantaged. This is difficult and requires all sectors' proper planning and collaboration. Financial literacy, behavior and knowledge should be more valuable in making informed decisions.

4.1. Financial Inclusion, Fintech, and Artificial Intelligence

Applications based on AI and ML have seen a notable rise in the BFSI sector, attributed to their ability to streamline processes (Moutinho and Smith 2000), refine decision-making (Polychroniou and Giannikos 2009), augment customer experiences (Zeinalizadeh et al. 2015), and identify fraudulent activities (Vorobyev and Krivitskaya 2022). Hanafizadeh and Zare Ravasan (2018) found that by outsourcing e-banking services, it is possible to categorize all 23 factors into three distinct segments: technological, environmental, and organizational. According to the author, fintech will become the standard in Asia once it is widely adopted by the majority of the people and when large institutions utilize the technology to provide their services. Enhancing financial inclusion will facilitate the integration of small enterprises, farmers, and general economic growth into the country's income. The mobilized notion of consumer interest, anchored in the rhetoric of consumer technological empowerment, transcends and conceals necessary considerations regarding the vulnerability of consumers in the context of data-intensive technologies and the platform economy (Ferrari 2022). AI and ML are widely utilized in the insurance industry, especially for tasks like claims reserving and assessing risks (Chukhrova and Johannssen 2021).

Financial inclusion in the digital mode is a primary goal for the UN Sustainable Development Goals. To achieve this, appropriate communication infrastructure is necessary and is possible in countries with a good range of communication infrastructure (Arner et al. 2020). "FinTech's and digitization have made consumers vulnerable to poorly informed financial decisions and financial fraud." Thus, there is a need for digital financial literacy for disadvantaged and vulnerable groups (Grohs-Müller and Greimel-Fuhrmann 2018). Establishing the new infrastructure for building digital infrastructure leads to data availability and links judicial processes with financial transactions (Arner et al. 2019). With the advent of information and communication technology and its association with financial platforms, a system has emerged that provides new opportunities to close the wealth disparities in developing nations. In the context of the developing region, empirical investigations are uncommon, and this study aims to cover this void (Hussain et al. 2023).

Digital transactions are comparatively low among the rural population, older people, women, and less educated people. Providing digital infrastructure to inaccessible areas will bring more awareness and financial literacy for the marginalized and the deprived, which is the first step for financial inclusion (Barik and Sharma 2019). The BFSI (Banking, Financial Services, and Insurance) sector is also embracing the advancements of AI (Artificial Intelligence) and ML (Machine Learning). These technologies are increasingly being integrated into the sector's operations, with the aim of enhancing operational efficiency, elevating the customer experience, and reducing risks (Mi Alnaser et al. 2023; Goodell et al. 2021). George and Mpeera (2020) analyzed the impact of the acceptance and usage of mobile banking on the promotion of financial inclusion. The implementation and utilization of this technology should be supported by a robust regulatory framework to effectively manage and prevent cyber fraud. (Agarwal and Chua 2020) stated that utilizing financial technology is advantageous for households, as it facilitates the augmentation of consumption and borrowing. Kawimbe (2020) found that the concept of adoption and usage of digital modes such as mobile banking, internet banking and financial literacy is still emerging. Disruptive technologies, specifically Artificial Intelligence, have permeated the retail sector and had a significant impact on organizational resources, both internal and external. Fintech startups have also been significantly impacted by the surge of digital transformation (Almansour 2023). AI and ML methods have a significant influence on improving the efficacy and efficiency of anti-money laundering initiatives in the banking, financial services, and insurance (BFSI) industry. Strong AML processes are becoming more and more important as the financial sector gets more digitalized and as internet transactions increase (Pattnaik et al. 2024).

In fintech research, the technology acceptance model (TAM) was frequently expanded to examine customer concerns. Wang (2022) conducted a comparison of verification techniques in fintech, utilizing the technology acceptance model (TAM) as a basis for the analysis. The implementation of digital banking in The Kingdom of Saudi Arabia was examined by (Alnemer 2022). Bajunaied et al. (2023) investigated consumers' behavioral intention to use fintech services. Taking the aforementioned into consideration, this study uses the TAM to develop a research methodology for rearranging and assessing consumer adoption of Open API in fintech apps.

Technology businesses are responding to consumer expectations by offering more convenient and affordable ways to borrow money, invest, and transfer funds. Modern technologies, evolving consumer behavior, and the rise of fintech are all causing disruptions in the insurance sector. Fintech technologies have the potential to improve risk assessment, increase financial inclusion, save costs, and boost efficiency in the insurance sector, among other benefits (Hassan et al. 2023).

4.2. Financial and Digital Literacy of Consumers and Financial Inclusion

The authors note the paucity of research on financial literacy and financial conduct (Jappelli and Padula 2013; Lusardi et al. 2014; Lusardi and Tufano 2015; Söderberg 2016). This premise is based upon psychological reactions such as attitude, bias, and confidence, which lead to a particular behavior towards financial matters. Therefore, there needs to be an education of financial aspects to create awareness to witness positive behavior to alter the behavior. Financial literacy could be defined as "the ability of an individual to plan their finances, plan for debt and retirement and maintain wealth" (Lusardi and Mitchell 2014). High financial literacy is advantageous because it increases savings and helps in the efficient usage of funds (Wann 2017). Even after controlling income and education, individuals with higher financial literacy scores are more likely to hold formal and informal savings than those with lower financial literacy scores (Morgan and Long 2020). The depth of digital finance usage is measured by specific services used by users, like payment, credit, fund management, insurance, and investment (Xi and Wang 2023).

Kass-Hanna et al. (2022) demonstrates that both financial and digital literacy are crucial elements in fostering inclusion and financial resilience. Regions, along with destitute, rural, and families led by females, display variability. In order to address the potential issue of endogeneity, a robustness test is incorporated. The findings underscore the necessity of redefining conventional financial literacy to incorporate digital literacy, which has substantial ramifications for governments considering both as a combined approach to bolstering households' enduring financial resilience.

Less financially literate people are less likely to invest in the stock market (Mouna and Jarboui 2016). Age, education level, and annual income affect financial literacy levels. Cude et al. (2019) stated that the higher the income is, the more financial knowledge there is. The author recommended formulating a national education strategy focusing on financial literacy. "Financial literacy is an issue with vast implications for economic health, and its development can pave the way for robust and stable economies". Financial literacy increases and sharpens the economic decisions of an individual (Goyal and Kumar 2020).

Grohmann et al. (2018) stated that financial literacy leads to financial inclusion based on the S&P global financial literature survey data. Baidoo et al. (2018) noted that financial literacy level affects saving habits and identified income distribution, size of the home, and the factors that lead to savings. Adetunji and David-West (2019) surveyed more than 22,000 respondents in Nigeria and found that financial literacy affects savings patterns, whether taken from formal or informal financial institutions. Financial literacy positively impacts the inclusion and savings habits in countries such as Cambodia and Vietnam (Morgan and Trinh 2019). Policymakers need to take different initiatives and ensure that their proper implementation for society's sustainable development will improve their economic well-being (Goyal and Kumar 2020).

4.3. SHGs, Women Empowerment and Financial Inclusion

It is worth mentioning that some of the programs have been hit, while some failed due to corruption, ineffective planning, and bureaucratic mistakes. Credit facilities must be offered to improve entrepreneurship among women. The Self Help Group—Bank Linkage Programme (SHG-BLP) significantly reduces social exclusion among participants compared to non-participants and also ensures financial inclusion (Maity 2023).

Access to savings opportunities has modest but more consistent benefits for the impoverished than credit and carries fewer downside risks for clients (Duvendack and Mader 2020). The research highlights the key success factors (KSFs) that led to the GNFC Neem Project's socioeconomic success. Key success factors include maintaining a strategic alignment between social impact and economic feasibility; building market awareness, trust, and acceptance; developing win-win partnerships with diverse stakeholders; and leveraging distribution channels and networks for last-mile collection, storage, and transport of neem seeds (Goyal et al. 2020).

4.4. Intensifying Access to Financial Services to Consumers

Financial services have reached different sections of society and are tried using various methods. A sound functioning system allows formal financial institutions to channel the money into an appropriate opportunity for growth, wealth equity, and poverty reduction. Factors such as transaction and contract enforcement costs and information irregularities in the financial market significantly bind the poor to enter the financial market. Government programs that support self-help groups (SHGs) generally target women on the premise that this improves women's decision-making (Kochar et al. 2022).

As (Paramasivan and Ganeshkumar 2013) have mentioned, the greater the bank branches' density, the more we can find people using banking services. They stated that financial literacy is not the only criterion for financial inclusion but that other means, such as investment, play a crucial role in improving investment. Allen et al. (2016) reported that the formal usage of accounts determines financial inclusion and indicates gender, age, and poverty as part of the financial system. The low-cost accounts must have higher accessibility so that everybody—the poor, elderly, rural, young—can come under its ambit. Lending to women benefits their households by diversifying their incomes and enhancing their resilience to disruptions. Therefore, microcredit can be a potent tool for boosting incomes and shielding families from the risk of crises (Garikipati 2008).

4.5. Financial Inclusion and Economic Growth

Financial inclusion, which is usually understood as access to formal financial services such as credit, insurance and secure saving opportunities, has been identified as a critical engine of economic growth (Claessens and Perotti 2007). An empirical analysis was conducted to examine the impact of the coordination between agricultural insurance and digital financial inclusion on agricultural output. The study constructed a regression model to reveal that the coupling coordination degree significantly enhances farmers' agricultural output. Furthermore, the promotion effect of this coordination is more noticeable in mountainous areas and eastern China (An et al. 2023). Financial inclusion is a crucial determinant of economic growth. In South Africa, the availability of financial services led to a good life with increased savings and better financial decisions in the household (Karlan and Zinman 2010). Han and Melecky (2013) mentioned that the greater the financial reach is, the greater the stability. They added, "greater access to bank deposits can make the funding base of banks more resilient in times of financial stress". (Levine 2005; Pasali 2013) suggested that financial well-being is associated with growth and employment and has an enormous impact.

Agricultural insurance is an effective risk management tool that compensates farmers for post-disaster losses, contributing to the stability and continuity of agricultural production (Tappi et al. 2022). Ardic et al. (2013) reported the global stand on financial inclusion and found that high-income countries had ten times the deposit penetration as low-income countries. The lower-middle-income countries had three times the deposit penetration of low-income countries. There was steady growth in the number of commercial bank branches and ATMs. Banerjee and Francis (2014) determined the relationship between social development and financial inclusion based on poverty eradication, employment generation and social harmony. Their results showed that Kerala and Maharashtra had higher financial inclusion rates, whereas Punjab and Tamilnadu scored average, but Mizoram had a lower rate but a higher human development index. On the other hand, Orissa and Bihar scored low in both financial inclusion and social development. Manyika et al. (2016) concluded that financial inclusion could achieve financial growth and improve society's overall development. Sharma (2016) discussed the relationship between financial inclusion and economic growth with the Granger causality test, which revealed linkage among outreach and development and deposit and gross domestic product (GDP). Therefore, financial inclusion is connected to economic growth. Kim et al. (2018) studied the link between financial inclusion and socioeconomic development in OIC countries. The results indicated that the financial inclusion and well-being of the nation were connected. Gutiérrez-Nieto and Serrano-Cinca (2019) realized that technology and artificial intelligence are connected and focus on the client's individualization.

Muqtada (2020) found that macroeconomic policymaking would require rethinking to meet the challenges faced due to COVID-19. COVID has resulted in a slowdown in the economy that would require several policy measures to protect lives and livelihoods. It would require an expansionary macroeconomic policy, albeit prudent, that focuses robustly on stepped-up investment, job growth, and reduction of inequality and vulnerability.

4.6. Consumers' Financial Inclusion and Financial Capability

Opening a bank account and savings habits help use the amount during any emergency and are growing among millennials and lower-income groups (Friedline and West 2016; Hogarth and Anguelov 2003). Adams and West (2015) found that savings help utilize money during emergencies among the lower-income group and may find more mechanisms if they adopt financial schemes. Friedline and West (2016) clarifies the stance of financial inclusion and economic inclusion wherein the former focuses entirely upon the usage of banking schemes and the latter is about wealth equity and distribution. Reyers (2019) analyzed the importance of the broader financial capability concept in predicting emergency savings for those living above and below the poverty line and suggested that programs aimed at encouraging emergency savings should enhance financial self-efficacy and financial inclusion. Financial inclusion is a fundamental element of the financial capability index (Náñez Alonso et al. 2022; Potocki and Cierpiał-Wolan 2019). (Kempson et al. 2005; Kempson et al. 2017) proposed financial inclusion within three domains: "financial knowledge, financial skills and financial confidence". All the components were ably supported by (Xiao et al. 2015) and were associated with financial behavior with financial capability.

4.7. Socioeconomic Determinants of Financial Inclusion

Socioeconomic Determinants of Financial Inclusion

This subsection directly addresses the current state of understanding regarding the relationship between socioeconomic factors and financial inclusion. It reviews literature that elucidates how variables like income, education, and demographics impact an individual's access to financial services. This section contributes to RQ1 by providing a foundational understanding of the key socioeconomic determinants that influence financial inclusion.

By identifying specific socioeconomic factors that affect financial inclusion, this section also informs RQ2. It highlights areas within socioeconomic development, such as education and income inequality, that require focused attention to enhance financial inclusion.

In discussing existing literature, gaps in the current research become apparent, such as the need for more detailed studies on how specific demographic groups are impacted by financial exclusion. This links to RQ3 by suggesting areas for future research.

Income Levels and Employment Status

Income is a primary determinant of financial inclusion. Higher income levels generally correlate with greater access to financial services. Studies like Demirguc-Kunt et al. (2015) have shown that individuals with steady income streams are more likely to have bank accounts and access credit facilities. Employment status also plays a significant role. Formal employment often provides easier access to financial services through payroll accounts or employer-sponsored financial products.

Education and Financial Literacy

Education is a key factor in enhancing an individual's understanding and usage of financial services. Higher levels of education correlate with increased financial literacy, which in turn leads to better engagement with financial services (Lusardi and Mitchell 2014). Financial literacy campaigns and education programs can significantly boost financial inclusion, especially in regions with low levels of formal education.

Demographic Factors: Age, Gender, and Ethnicity

Age, gender, and ethnicity are important in understanding disparities in financial inclusion. For example, younger and older age groups might face different barriers to access (Campero and Kaiser 2013). Gender disparity in financial inclusion is a significant issue. Women often face higher barriers to access financial services due to factors like legal restrictions or societal norms (Demirguc-Kunt et al. 2013). Ethnic minorities and indigenous populations can also face unique challenges, often stemming from systemic inequalities or discrimination.

Technological Factors and Geographic Location (Urban vs. Rural): Enhancing Financial Inclusion

Geographic location plays a pivotal role in financial inclusion. People in rural areas often have less access to financial services compared to their urban counterparts due to factors like distance from financial institutions and lack of infrastructure (Beck et al. 2007). Technological solutions like mobile banking have begun to bridge this urban-rural divide, as documented in studies of mobile money in African countries.

This subsection contributes to RQ1 by examining how technology has transformed the landscape of financial inclusion, a critical aspect of current understanding. It includes insights on digital banking, mobile money, and fintech innovations. In terms of RQ2, this section points to technological advancements as a crucial area for focused development, emphasizing how technology can bridge socio-economic divides and enhance financial accessibility.

The discussion of technology in financial inclusion also reveals potential research gaps, such as the long-term impact of digital financial services on different socioeconomic groups, aligning with RQ3.

Cultural and Social Norms

Cultural and social norms influence attitudes towards money, savings, and credit, which can affect financial inclusion. In some cultures, traditional forms of saving and lending may be preferred over formal financial services. Trust in financial institutions is another key aspect. In regions where there is a historical mistrust of banking systems, people are less likely to engage with formal financial services.

Government Policies and Regulation

Government policies and regulatory environments can either facilitate or hinder financial inclusion. For instance, policies that encourage branch expansion in underserved areas or mandate financial literacy in school curricula can promote inclusion. Similarly, regulation that lowers entry barriers for non-traditional financial service providers can enhance access and competition.

5. Conclusions

5.1. Financial Inclusion, Fintech, and Artificial Intelligence

The rise of digital initiatives has vastly expanded access to banking services globally. In India, for instance, government initiatives like the Jan Dhan Yojana have significantly driven financial inclusion, offering basic banking services with simplified KYC processes and no minimum balance requirements. Despite these advancements, challenges such as financial illiteracy and technological backwardness persist, hindering the full utilization of financial services by many, especially first-time account holders (Nanda and Kaur 2016). In the BFSI industry, artificial intelligence (AI) and machine learning (ML) have revolutionized efficiency, customer experience, and risk management (Zeinalizadeh et al. 2015; Cao et al. 2022). Developers and relevant companies should highlight the advantages and practical benefits of using Open API (application programming interface) when building applications based on it. This will encourage more businesses and users to use the technology and further progress fintech innovations (Wang 2023).

Fintech's expanding role is crucial in promoting economic growth aligned with Sustainable Development Goal 8 (SDG-8), which focuses on decent work and economic growth. Cryptocurrencies, with appropriate legal and environmental controls, could further facilitate this progress (Abakah et al. 2023). The manuscript underscores the importance of digital banking services and financial literacy in fostering financial inclusion, emphasizing the need for financial education, especially among vulnerable groups.

Artificial Intelligence (AI) has significantly enhanced credit scoring and risk assessment, particularly for individuals with limited credit histories or low incomes. AI-powered identification and verification systems have also improved security while reducing fraud. However, the digital divide remains a significant challenge, as limited access to technology and digital skills prevents some from fully benefiting from AI-driven financial services. Concerns also arise regarding privacy, data security, and the potential for unsustainable debt levels due to easy access to AI-enabled loans (Yanting and Ali 2023). Together, policymakers, companies, and people need to tackle these issues and make sure that the benefits of automation and artificial intelligence are maximized while limiting any unfavorable effects.

5.2. Financial Literacy of Consumers, Financial Capacity, and Financial Inclusion

Financial inclusion is a key driver of inclusive growth, which is crucial for overall stability. Adequate access to financial products and services for all societal sectors is vital, particularly in emerging economies. Financial literacy generates demand for these services and is a global issue with far-reaching implications.

The current economic downturn has heightened policymakers' focus on financial capability, or the ability of individuals to manage their finances effectively. Studies show significant variability in financial capability across different demographic groups, with young, unemployed single adults often having the lowest financial capability compared to older, employed individuals in dual-income households (Taylor 2011).

5.3. SHGs, Women Empowerment, Gender Issues, and Financial Inclusion

Self-help groups (SHGs) have become globally recognized as microcredit institutions contributing to women's empowerment. Policies promoting savings and loans can strengthen SHGs, particularly in rural areas. Enhancing infrastructure like education and healthcare and overseeing SHG standards are critical for sustainable development. Financial literacy is particularly beneficial for women accessing microfinance (Swamy 2014). Collaboration with banks, corporations, and other agencies is essential to evolve SHGs into member-owned and managed institutions, contributing to financial inclusion and inclusive growth. Financial inclusion programs have shown positive impacts on gender equality and income for impoverished women.

5.4. Intensifying and Inclusivity of Access to Financial Services for Consumers

Being part of the financial system requires access to a variety of financial services and products. These resources address individual financial needs and are crucial for financial inclusion, which is closely linked to poverty alleviation (Sarma and Pais 2011). Despite its importance, financial inclusion has been somewhat overlooked in behavioral science literature. A comprehensive financial system facilitates income generation, leading to opportunities for entrepreneurship and holistic growth.

Financial literacy, digital penetration, AI, women's empowerment, addressing gender issues, and ensuring access to finance are key areas needing attention from policymakers and governments. These factors are vital in achieving the United Nations' Sustainable Development Goals. A robust banking network is instrumental in national development, offering employment, infrastructure, and overall growth. The effectiveness of financial inclusion measures varies across countries, but their potential to significantly improve the socioeconomic conditions in underdeveloped and developing nations is undeniable. Businesses that prioritize moral conduct and community service frequently foster more fulfilling environments for their stakeholders and workers, which raises satisfaction and happiness levels all around. These actions also contribute to the growth of financial inclusion by making it easier for a larger group of people to get financial resources and services (Xi and Wang 2024).

Policy Implications and Frameworks for Financial Inclusion

This section addresses RQ1 by reviewing the role of policy and regulatory frameworks in promoting financial inclusion, an essential aspect of current knowledge. It looks at various government initiatives and international guidelines that shape financial inclusion efforts. For RQ2, it identifies key policy areas that require attention for socioeconomic development, such as regulatory reforms and targeted financial education programs.

Lastly, in relation to RQ3, this subsection can highlight gaps in policy-related research, such as the effectiveness of different regulatory approaches in diverse socio-economic contexts, suggesting directions for future investigation. Financial inclusion is a multifaceted concept with significant implications for socio-economic development. It urges continued research and policy efforts to address the challenges and leverage the opportunities presented by financial inclusion. The research discusses the impact of different regulatory environments on financial inclusion and the importance of data privacy in online financial services. It suggests that policymakers should focus on creating an enabling environment for financial inclusion to thrive. The conclusion also outlines several areas for future research, such as the impact of fintech innovations, the role of financial inclusion in healthcare financing, and its relationship with mental health.

6. Sustainable Financial Inclusion Theory and Future Research Agenda

6.1. Sustainable Financial Inclusion Theory

The concept of financial inclusion is integral to achieving the Sustainable Development Goals (SDGs) and reducing inequality, as emphasized in the United Nations Sustainable Development Agenda 2030. Recognized for its role in promoting economic growth and lessening income disparity, financial inclusion remains a pivotal subject in contemporary research. The theory of sustainable financial inclusion, although lacking a universally accepted definition due to its subjective nature and varying individual and country-specific needs, is universally acknowledged as vital. Basic banking services form the cornerstone of financial inclusion, and initiatives like those implemented by the Indian government for basic accounts are transformative towards achieving inclusivity in India. The proposed theory aims to establish a framework for sustained financial inclusion, highlighting the necessity for accessible, affordable financial products and services for all, ensuring no one is left out. Key to this is building a robust infrastructure network, emphasizing the importance of the availability, affordability, and utilization of financial services.

6.2. Future Research Agenda

The global endeavor towards financial inclusion, while challenging, gains momentum through the endorsement of influential figures and public awareness via financial inclusion quotes. Future research should focus on the following areas:

- **Digital Age and Financial Inclusion**: Examining the influence of digital banking on unbanked populations and its socio-economic effects.
- **Gender and Financial Inclusion**: Investigating financial inclusion's role in empowering women and understanding gender-based disparities in financial access.
- **Financial Education and Literacy**: Assessing the socio-economic impacts of financial literacy and understanding financial service adoption through behavioral economics.
- **Impact on Policies and Regulations**: Evaluating how varying regulatory frameworks affect microfinancing and the socio-economic implications of online financial data privacy.
- **Health and Wellbeing**: Exploring financial inclusion's role in healthcare financing and its relation to mental health.
- **Sustainability and Environmental Considerations**: Investigating financial inclusion's support for environmentally friendly initiatives and its alignment with the SDGs.
- **Fintech Innovations**: Analyzing the pros and cons of blockchain for financial inclusion and the socio-economic impacts of new fintech products.
- **Sociocultural Variables and Financial Behavior**: Studying the influence of cultural attitudes and trust in institutions on financial service adoption and use.

Theoretical Extension: The sustainable financial inclusion theory proposes a new framework focusing on ensuring financial goods and services are accessible, affordable, and utilized by all societal segments. It advocates for a comprehensive approach with a robust infrastructure and a customer-centric model, particularly addressing the needs of the impoverished in rural areas. The theory encourages empirical research linking financial service access to developmental outcomes and aims to tackle challenges for inclusive growth. Recognizing obstacles to financial inclusion, it seeks solutions for the socioeconomic advancement of diverse social groups.

This research agenda seeks to fill existing knowledge gaps and tackle emerging challenges in finance and socioeconomics, aiming to guide future studies and policy development in financial inclusion.

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