Financial inclusion and fintech research in India: A Review

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Abstract

This article presents a concise review of the existing financial inclusion research in India. We use a thematic literature review methodology. We show that the Reserve Bank of India (RBI) has been at the forefront of financial inclusion in India and has used collaborative efforts to deepen financial inclusion in India. The review of existing literature shows that the major determinants of financial inclusion in India are income, age, gender, education, employment, ICT, bank branch network and nearness to a bank. The common theories used to analyse financial inclusion in India are the finance-growth theory, the diffusion of innovations theory, development economics and modernization theory, the vulnerable group theory of financial inclusion and the dissatisfaction theory of financial inclusion. The common methodologies used in the literature are surveys, questionnaires, financial inclusion index, regression estimations and causality tests. Existing studies also show that financial inclusion in India affects the level of poverty, human development, financial stability, monetary policy, and income level. Some criticisms of the financial inclusion efforts in India include the inability to meet the specific needs of the poor, poor geographical access, excessive transaction cost, inappropriate banking products, financial illiteracy and a large digital divide between tech savvy and non-tech savvy people. We also suggest some areas for future research.

Keywords: **ICT, Internet**, financial inclusion, literature review, access to finance, causality tests, regression, India, index, theory.
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1. Introduction

The purpose of this article is to present a concise review of the existing financial inclusion research in India. Financial inclusion is the provision of basic and affordable formal financial services to all segments of the population so that everyone can have access to basic and affordable formal financial services (Markose et al, 2022; Ozili, 2018). Financial inclusion is desirable because it affects every segment of society positively; it improves access to financial services and gives banked customers an opportunity to access and use the financial services they need to meet their needs and improve their welfare (Demirgüç-Kunt and Klapper, 2012; Ozili, 2021).

To increase financial inclusion, a country must develop a strategy that will be used to meet its financial inclusion objectives, and the selected financial inclusion strategy must be designed and adapted to reflect the peculiarities of the country (Chandran, 2011; Arun and Kamath, 2015). Recently, India has been at the centre of financial inclusion debates in the Asian region due to its unique approach to financial inclusion. Over the last decade, financial inclusion has been a top priority in India. The Indian government and the Reserve Bank of India (RBI) introduced several financial inclusion initiatives aimed at providing easy access to financial services to a large section of the Indian population who remain unbanked (Srinivasan et al, 2024).

The RBI set up the Khan Commission in 2004 to investigate financial inclusion. The recommendations of the commission were incorporated into the national financial inclusion strategy between 2005-2006, and banks were urged to review their existing banking practices to align them with the objective of financial inclusion. The Indian government also launched the Pradhan Mantri Jan Dhan Yojana (PMJDY) scheme in 2014 to further deepen financial inclusion in India by providing universal access to banking facilities to every member of the population.

The progress made in financial inclusion in India has stimulated much interest in financial inclusion among academics and researchers (e.g., Khan, 2011; Subramanian, 2013; Swamy, 2014; Sharma, 2016; Rastogi et al, 2017; Inoue, 2019; Churchill and Marisetty, 2020; Singh and Yadava, 2022; Pal et al, 2022; Lenka, 2022; Nayak et al, 2024 etc.). There has been much research interest in understanding the determinants and challenges of financial inclusion in India. But there has been very little review of the existing financial inclusion research in India. To the best of our knowledge, there is no review article that present a concise review of the existing research on financial inclusion in India. Therefore, in this study, we undertake a concise review of the state of financial inclusion in India.

Regarding the review methodology, we used a thematic literature review methodology to conduct the review. Google Scholar search engine was used to identify the relevant research articles on financial inclusion in India. We inserted two keywords, e.g., "financial inclusion'' and "India" into the widely used research search engine 'Google Scholar' and we select a sample period from 2010 to 2022. The articles obtained from the Google Scholar search results were used to conduct the literature review. We included journal articles, policy articles, working papers and academic conference papers to increase the sample size and to ensure that our article selection takes into account the research that exists in published and non-published formats. After sorting, the final sample of research articles used to conduct the review was less than 320 articles.

We divided the review according to major themes in the literature, focusing on the (i) RBI financial inclusion policy initiatives, (ii) the determinants of financial inclusion in India, (iii) common theories and methodologies, (iv) general effect of financial inclusion, and (v) the criticisms or challenges of the financial inclusion efforts in India. We also present a bibliometric analysis to identify the (i) financial inclusion policy initiatives timeline, (ii) quantity of financial inclusion research, (iii) journal citations, and (iv) interest in internet information about financial inclusion. Finally, we present some pertinent areas for future research to advance the literature.

This review articles adds to existing research in several ways. One, our review article contributes to the development literature by providing a review of existing research on the relationship between access to finance and development outcomes. Our review article can help the reader to understand the state of research in this area. Two, our review article contributes to the financial inclusion literature by presenting a concise picture of the existing financial inclusion research in the literature focusing on India. Three, our study contributes to ongoing debates about the role of financial inclusion in improving people's welfare in India.

The rest of this review article is structured as follows. Section 2 presents the thematic review of literature. Section 3 presents a bibliometric analysis. Section 4 presents some areas for future research. Section 5 concludes the study.

2. Thematic review

In this section, we review the India financial inclusion literature according to major themes that have dominated the literature over a decade. The themes are the financial inclusion determinants, the effect of financial inclusion, financial inclusion theories and methodologies, and the criticisms or challenges of financial inclusion in India.

2.1. RBI financial inclusion policy initiatives

We cannot discuss financial inclusion research in India without discussing the efforts of the RBI in promoting financial inclusion in India. This is because a large number of financial inclusion research in India have been anchored on RBI's financial inclusion policy initiatives (e.g., Gupte et al, 2012; Garg and Agarwal, 2014; Aggarwal, 2014; Iqbal and Sami, 2017). India's central bank, also known as the Reserve Bank of India (RBI) is responsible for implementing the financial inclusion strategy of India. The RBI worked collaboratively with the National Payments Corporation of India (NPCI), the Ministry of Finance, the Telecom Regulatory Authority of India (TRAI) and the Unique Identity Authority of India (UIDAI). The RBI adopted a bank-led model for achieving financial inclusion. Below are some of the initiatives led by the RBI in accelerating financial inclusion in India as documented in Chakrabarty (2011).

(i) The RBI created a conducive regulatory environment and provided institutional support for banks to accelerate their financial inclusion efforts.
(ii) The RBI removed all regulatory bottle necks that hinder banks from achieving greater financial inclusion in India.
(iii) The RBI required banks to open Basic Saving Bank Deposit (BSBD) accounts with zero minimum balances.
(iv) The RBI loosened know-your-customer requirements to encourage a seamless account opening process.
(v) Simplified branch authorization policy to address the issue of uneven distribution of bank branches.
(vi) Compulsory requirement of opening branches in un-banked villages.
(vii) Introduced an effective approach for cash management, customer complaints and the regulation of bank correspondents.
(viii) Require public and private sector banks to submit board approved three-year Financial Inclusion Plan (FIP).
(ix) Carryout outdoor financial literacy outreach once a month to scale up financial literacy efforts.
(x) Increased licensing of new banks

2.2. Determinants of financial inclusion in India

The literature shows that the level of financial inclusion in India is determined by varying socioeconomic factors. Existing studies show that the level of income is the most significant determinant of financial inclusion in India (e.g., Bhanot et al, 2012; Raichoudhury, 2020; Dar and Ahmed, 2021). Other determinants of financial inclusion have been documented in the literature. For instance, Simon (2020) and Dar and Ahmed (2021) show that age, education, employment and income are significant determinants of financial inclusion, while Govindapuram et al (2022) find that wealth and gender of the household head and their rural-urban location are crucial determinants of women financial inclusion in India. Pandey et al (2022), Bansal (2014) and Tikku and Singh (2023) identify modern information and communication technology (ICT), Fintech, digitalisation and mobile banking as important determinants of financial inclusion because it can help to extend the provision of financial services to people living in remote areas, while Kumar and Pathak (2022) and Ghosh and Vinod (2017) show that gender and financial awareness are important factors influencing the level of financial inclusion. Meanwhile, Rastogi and Ragabiruntha (2018), Kumar (2013) and Raichoudhury (2020) show that online banking, financial literacy, bank branch network, infrastructure, employment opportunities and income are significant determinants of financial inclusion. Bhanot et al (2012) and Sathiyan and Panda (2016) identify nearness to post office banks, number of bank branches, population dependency per branch and industry concentration as significant determinants of financial inclusion in India. To summarise, the identified determinants of financial inclusion in India are income, age, gender, education, employment, income, wealth, ICT, bank branch network and nearness to a bank.

2.3. Fintech in India

The fintech market in India is one of the fastest growing markets in Asia. India's Fintech industry market size reached US$50bn in 2021 and is expected to exceed US$100bn by 2025. Some of the largest Fintech companies in India are Paytm, MobiKwik, ItzCash and InCred.

Despite the market growth of Fintech, academic research into Fintech in India is surprisingly limited. Few existing studies show a consensus that Fintech can facilitate efficient payments and reduce the cost of payment in India (Vijai, 2019; Kandpal and Mehrotra, 2019; Rajeswari and Vijai, 2021). Existing studies also show that Fintech can deepen financial services, improve the quality of financial services, and develop innovative models to assess risks in India (Singh, 2020; Raj and Upadhyay, 2020). However, some challenges of Fintech in India have been identified namely, lack of trust, cybersecurity risks, fierce competition, infrastructure deficits and unfavourable economic fluctuations (Priya and Anusha, 2019; Baporikar, 2021).

2.4. Common theories and methodologies

The common theories used in the literature to explain financial inclusion in India are the finance-growth theory (e.g. Sharma, 2016; Sethi and Acharya 2018), the diffusion of innovations theory (e.g. Singh and Prasad, 2021), the development economics and modernization theory (e.g. Pal et al, 2022), the vulnerable group theory of financial inclusion (e.g. Sharma and Mathur, 2022), and the dissatisfaction theory of financial inclusion (e.g. Gupta and Kanungo, 2022). In terms of research data, most financial inclusion research has been conducted using both primary data and secondary data. Studies based on primary data often use surveys, questionnaires and case studies such as Chattopadhyay (2011), Bhanot et al (2012), Kaur and Kapuria (2020), Churchill and Marisetty (2020), Govindapuram et al (2022), Yadav and Shaaikh (2023) and Tikku and Singh (2023). Other studies use secondary data that are archived with external data providers such as the Reserve Bank of India, the World Bank and other external sources (see, for example, Sharma, 2016; Churchill and Marisetty, 2020). In terms of research methodology, the most common research methodologies used in the Indian financial inclusion literature are the literature review methodology (Goel, 2023), questionnaires (Chattopadhyay, 2011; Bhanot et al, 2012), surveys (Kaur and Kapuria, 2020; Churchill and Marisetty, 2020; Govindapuram et al, 2022; Yadav and Shaikh, 2023), regression estimation methodology (Kumar, 2013; Sathiyan and Panda, 2016; Inoue, 2019; Raichoudhury, 2020), financial index methodology (Laha et al, 2011; Singh et al, 2011; Gupte et al, 2012; Kaur and Kapuria, 2020), causality tests (Sharma, 2016), and data envelopment analysis (Singh and Yadava, 2022).

2.5. General effect of financial inclusion

In this section, we explore the effect of financial inclusion as documented in the literature. Regarding the effect of financial inclusion on development outcomes, Inoue (2019) investigates the effect of financial inclusion on the level of poverty and finds that financial inclusion that is achieved through public sector banks reduces the poverty ratio compared to financial inclusion that is achieved through private sector banks in India. Churchill and Marisetty (2020), using survey data of 45,000 Indian households, examine the effect of financial inclusion on poverty. They find that financial inclusion has a strong poverty-reducing effect in India. Subramanian (2013) shows that bank branch expansion and card-based banking services in India needs to be supported with financial literacy programs and marketing campaigns to ensure that these services are used by the adult population to improve their welfare and lead to better development outcomes. Singh and Yadava (2022) examine how financial inclusion programs relate to development in 28 Indian states. They find that Indian states that have better human development index have better financial inclusion index.

Regarding the effect of financial inclusion on financial and economic systems, Khan (2011) points out that financial inclusion helps to provide a more stable deposit base which could improve bank funding as against reliance on borrowed funds, and the deposits can enhance the soundness and resilience of financial institutions. Sharma (2016) assesses the relationship between several dimensions of financial inclusion and economic development in India and finds a positive association between economic growth and several dimensions of financial inclusion. Rastogi et al (2017) show that financial inclusion helped to achieve India's demonetisation objectives as a part of the monetary policy of the Reserve Bank of India. Swamy (2014) shows that financial inclusion improves the income of poor people participating in financial inclusion programs. Pal et al (2022) find that financial inclusion increases women's earning status, their participation in financial decision-making in their household and their likelihood to benefit from social welfare schemes which increases women empowerment. Lenka (2022) shows that financial inclusion is an essential element for financial sector development especially in India because financial inclusion increases financial access and financial depth in India. In contrast, financial inclusion also has some negative effects. Notably, Ghosh (2013) shows that microfinance alone cannot solve the development problems of India; in fact, profit-oriented microfinance institutions have been problematic; therefore, microfinance institutions should be regulated and subsidised, and other strategies for viable financial inclusion of the poor should be more actively pursued. Maity and Sahu (2022) show that it is not enough to open a bank account for excluded people, banks also need to look at flexibility and timeliness in delivery financial services to the banked population. Markose et al (2022) examine the supply side funding gaps inherent in India's financial inclusion schemes especially the PMJDY scheme which started in 2014. They found a lack of economic viability of the PMJDY accounts in most Indian public sector banks which increases their financial fragility.

2.6. Criticism of the financial inclusion efforts in India

Existing studies have criticised India's financial inclusion efforts. For example, Thatte (2010) and Ananth and Öncü (2013) argue that the financial inclusion goals of India have fallen short of expectation primarily because of the inability of formal financial institutions to meet the specific needs of the poor and the lack of physical and social infrastructure, and these factors have enabled informal service providers to fill the vacuum by providing informal financial services to poor people at predatory and exploitative rates. Schuetz and Venkatesh (2020), in their study of economic development in rural India, point out four challenges responsible for the low level of financial inclusion in India. The four challenges include poor geographical access, excessive cost, inappropriate banking products, and financial illiteracy. Dixit and Ghosh (2013) and Malladi et al (2021) argue that, despite national efforts to increase financial inclusion in India, there is high financial illiteracy and a clear digital divide among tech savvy people and non-tech savvy people in India, and non-tech savvy people find it difficult to understand and use digital financial services especially people in the rural areas. Also, the increase in cybercrimes has resulted in general distrust in digital financial services among the rural population and is reducing digital financial services penetration in the rural population (Dixit and Ghosh, 2013). Meanwhile, Raj and Upadhyay (2020) show that Fintech is helping to increase financial inclusion in India, but issues such as data confidentiality, data privacy and consumer protection have not been addressed; in fact, there are concerns that Fintech innovations for financial inclusion can give rise to new risks and challenges, which may undermine market integrity or increase systemic risk in the Indian financial system (Raj and Upadhyay, 2020). More recently, Markose et al (2022) analysed India's PMJDY scheme and conducted an economic viability test on the roll-out of the PMJDY financial inclusion scheme through public sector banks and private sector banks in India. They found that the PMJDY scheme was less economically viable for public sector banks, and it led to higher financial fragility among public sector banks. The above are some of the criticisms of India's financial inclusion efforts.

3. Bibliometric analysis

In this section, we conducted a bibliometric analysis to analyse patterns in the financial inclusion policy timeline, the quantity of articles, number of journal citations, and interest in Internet information about financial inclusion.

3.1. Financial inclusion policy timeline

The timeline in table 1 below shows that RBI rolled out more financial inclusion policies in 2005, 2006, 2015 and 2016. Meanwhile, no financial inclusion initiatives were introduced in 2007, 2008, 2009, 2013 and from 2017 to 2022.

Table 1. Some financial inclusion policy initiatives introduced in India

Year	Financial inclusion policy initiatives
2005	Relaxation on Know Your Customer (KYC) Norms:
2005	No-Frills Account
2006	Liberalisation of Business Correspondents Model
2006	Business Facilitators
2007	None
2008	None
2009	None
2010	Financial Inclusion Plan for Banks
2011	Opening of Branches in Unbanked Rural Centres
2012	Basic Savings Bank Deposit Account (BSBDA)
2013	None
2014	Pradhan Mantri Jan Dhan Yojana (PMJDY)PMJDY scheme
2015	Pradhan Mantri Mudra Yojana (PMMY) scheme
2015	Pradhan Mantri Suraksha Bima Yojana scheme
2016	Stand up India Loan Scheme
2016	Unified Payments Interface (UPI)
2017	None
2018	None
2019	None
2020	None
2021	None
2022	None

3.2. Quantity of financial inclusion research that focus on India.

We analysed the quantity of existing financial inclusion research in India, based on the existing literature that are indexed in the Google Scholar database to allow us focus strictly on academic research papers and avoid counting non-academic articles. During our search in Google Scholar, we insert the keyword 'financial inclusion India' into the search box and obtain results for the post-2010 studies. The results revealed that significant research on financial inclusion in India emerged in the post-2014 period. The growing interest in financial inclusion as a research topic among academic researchers was due to great interest in India's progress in financial inclusion in the post-2014 years.

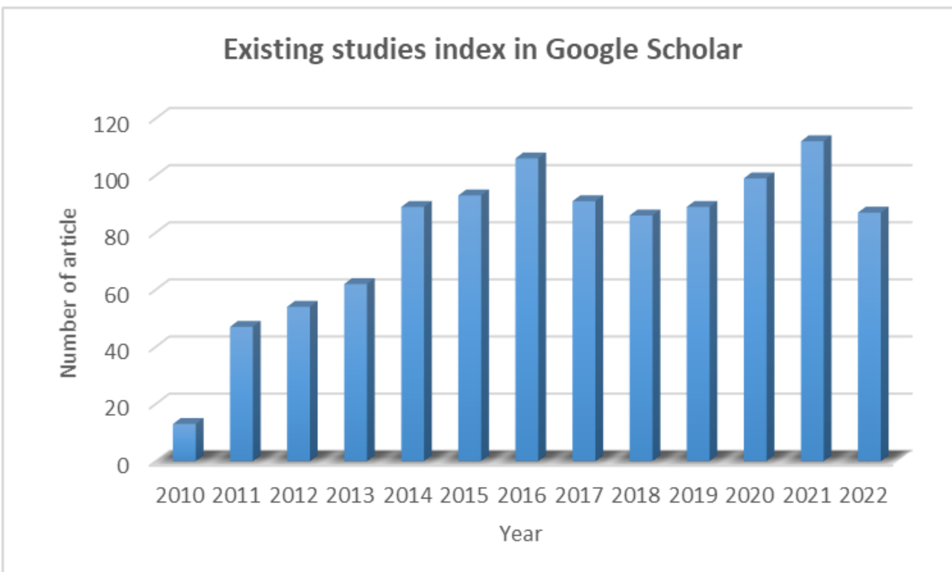

Figure 1: Existing studies indexed in Google Scholar

3.3. Top Journal citations

The topmost cited journals (with over 100 citations) indicative of the quality of journal in the field of financial inclusion are shown in figure 2. The journal with the highest citations is the *Journal of Financial Economic Policy*. The journal with the second highest citations is the *World Development Journal*, while the journal with the third highest citations is the *Journal of Policy Modelling.*

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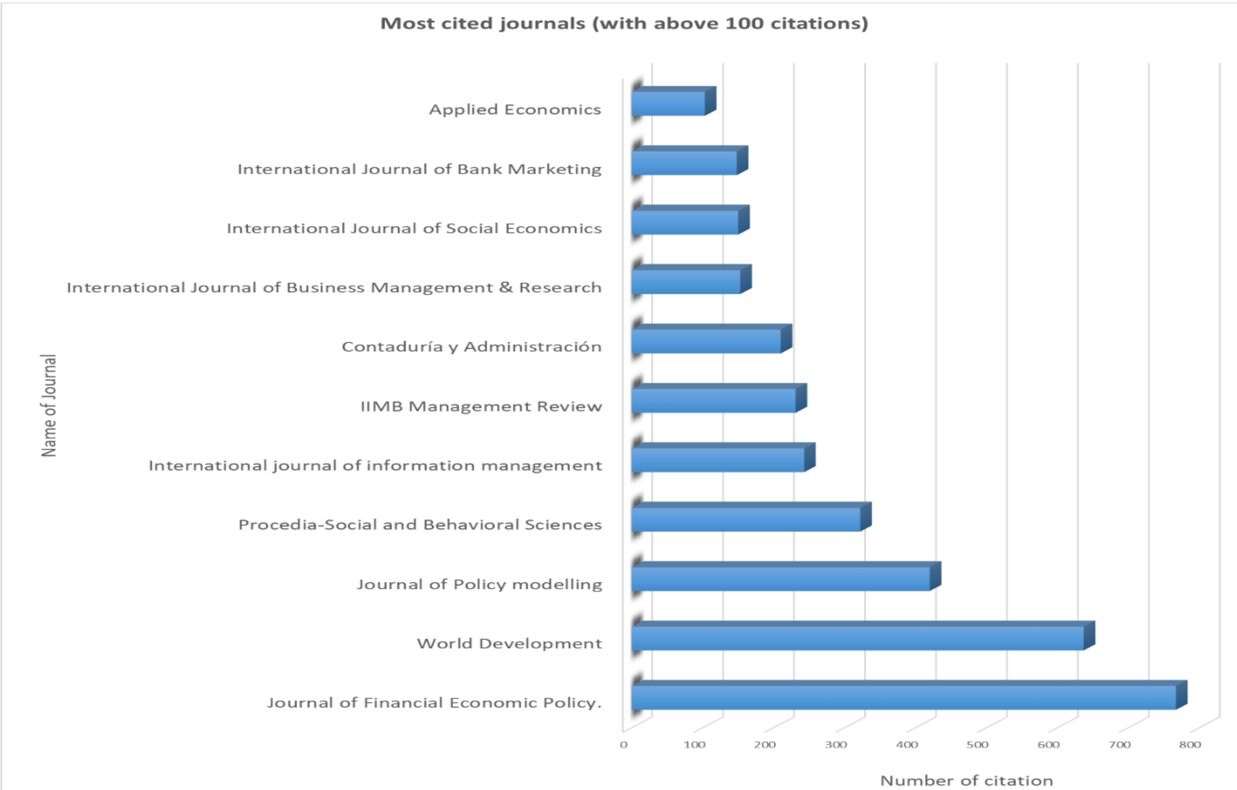

Figure 2: Most cited journals

3.4. Interest in internet information about financial inclusion

Figure 3 presents the data for internet search for information about financial inclusion. Figure 3 shows that some Indian regions recorded high interest in internet information about financial inclusion. Internet search for information about financial inclusion exceeded the 50-point mark in some Indian regions such as Odisha, Jharkhand, Delhi, Kerala, Maharashtra, Jammu and Kashmir, Haryana and Assam. The high interest in Internet information about financial inclusion in these regions was because many people in these regions were seeking to gain more online information about financial inclusion. They wanted to learn about how financial inclusion can improve their lives. Meanwhile, interest in financial inclusion information was extremely low in regions such as Gujarat, Tamil Nadu, Rajasthan and Uttar Pradesh. The reason for this is the general lack of interest in financial inclusion in these regions in India.

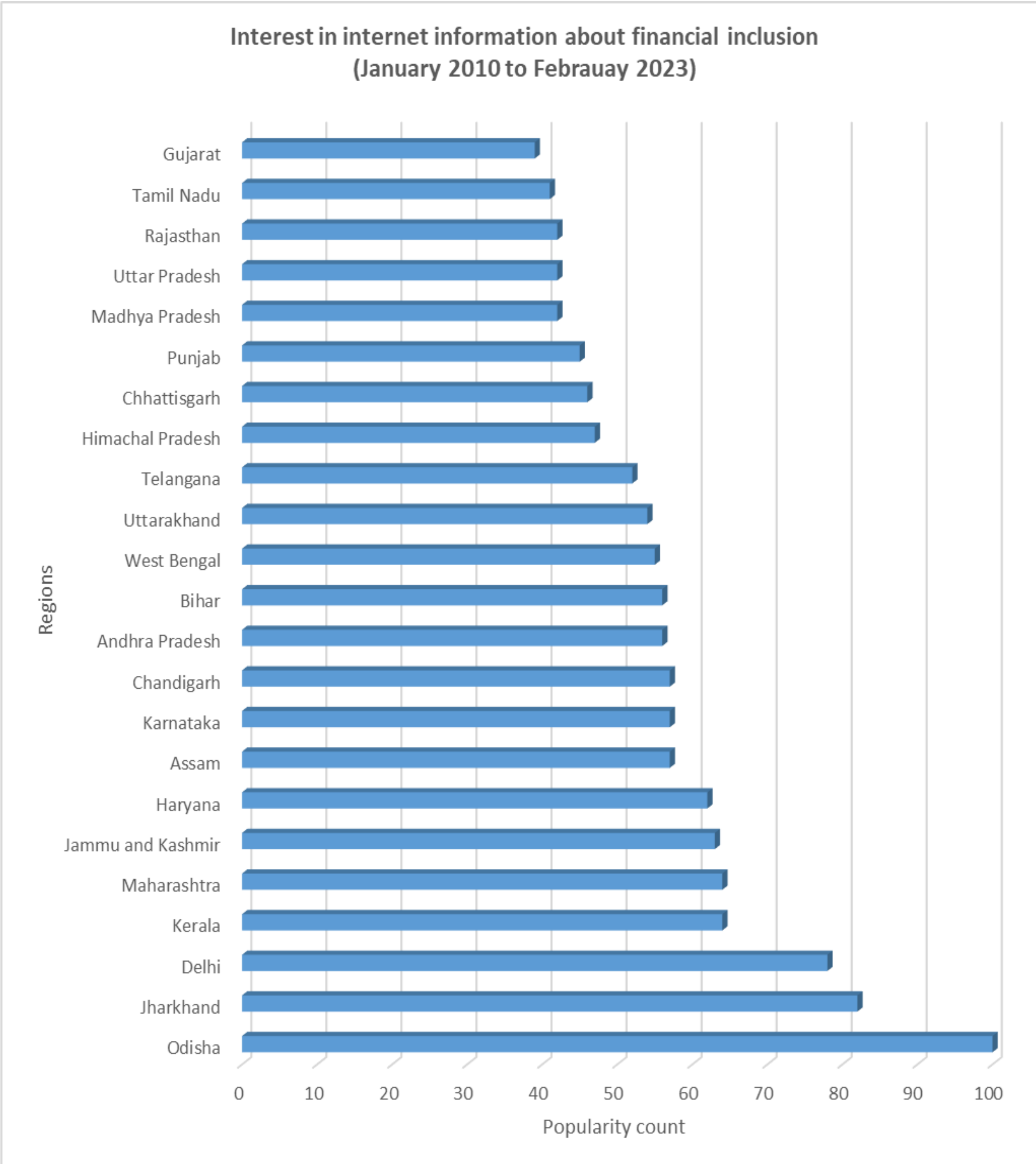

Figure 3: internet search for information about financial inclusion in India

4. Areas for future research

In this section, we identify areas for future research in financial inclusion in India – the areas that we consider to be significant to advance the literature.

One, the Indian literature is silent about how cultural factors might affect the level of financial inclusion in India. Cultural factors, such as pre-existing norms, traditions and religion, may discourage citizens from using formal financial services and can lead to low levels of financial inclusion (Ozili, 2023b), and this is particularly true in India where there are strong cultural norms and religious beliefs. There is a need to investigate the moderating influence of cultural factors on the level of financial inclusion in India. Future studies should investigate the influence of cultural factors on the level financial inclusion in India.

Two, the literature is silent about what can be done to help those who are left behind by India's progress in financial inclusion. Some groups of people are voluntarily excluded from the banking system in India. They prefer to be outside the formal financial system for reasons best known to them. Yet, there are no debates about what can be done to cater for the needs of these group of people. They can benefit from an alternative financial system or an informal financial system, that is fair and non-exploitative. Future studies should suggest alternative financial systems that can cater for the needs of people who are voluntarily excluded from the formal financial system.

Three, there is a need for more research on how the quality of formal institutions affect financial inclusion in India. It is important to understand whether good institutions, or bad institutions, affect the progress of financial inclusion in India. Good institutions provide the needed protection and accountability mechanisms that ensure that banked adults enjoy the full benefits of financial inclusion and ensure that users of financial services are treated fairly in the formal financial sector (Ozili et al, 2023a). Therefore, future studies should examine the influence of institutions on the level of financial inclusion in India. Finally, the PMJDY financial inclusion scheme has helped to increase financial inclusion for women. Most women in India now have a bank account but the challenge is how to get women to use the accounts. Future studies should suggest demand-based strategies to increase the bank account usage among Indian women.

5. Concluding remarks

In this article, we reviewed the existing literature on the financial inclusion in India from 2010 to 2022. The articles were analyzed using a thematic literature review methodology and based on the quantity of existing research, a timeline of the RBI's financial inclusion policy initiatives, top journal citations and interest in internet information about financial inclusion in India.

From our review of the existing literature, several conclusions were reached. One, the RBI has been at the forefront of financial inclusion in India and has used collaborative efforts to deepen financial inclusion in India. Two, the major determinants of financial inclusion in India are income, age, gender, education, employment, ICT, bank branch network and nearness to a bank. Three, the common theories used in the literature to analyse financial inclusion in India are the finance-growth theory, the diffusion of innovations theory, the development economics and modernization theory, the vulnerable group theory of financial inclusion and the dissatisfaction theory of financial inclusion. Four, the common methodologies used in the literature are surveys, questionnaires, financial inclusion index, regression estimations and causality tests. Five, financial inclusion in India affects the level of poverty, human development, financial stability, monetary policy and income level. Six, the criticisms of financial inclusion efforts in India include the inability to meet the specific needs of the poor, poor geographical access, excessive cost, inappropriate banking products, financial illiteracy and a large digital divide between tech savvy and non-tech savvy people. Finally, we suggested some areas for future research.

The contribution of this review article is twofold. One, it presents a concise review that provides a guide to both policymakers and researchers on the state of financial inclusion research in India, and it highlights the main themes and approaches that researchers have taken on this topic. Two, the article identifies some important research areas for future investigation into financial inclusion in India. The policy implication of the findings is that the findings of this review article confirm policymakers' intuition that many factors affect the level of financial inclusion in India. Consequently, policymakers in India should increase their financial inclusion efforts while mitigating the factors that hinder progress in financial inclusion. Regarding policy relevance, the success of financial inclusion in India will depend on collaborative efforts and a supportive policy environment.

The societal implication of the findings is that financial inclusion has positive benefits for India because high levels of financial inclusion would make finance available to all members of society regardless of income level thereby giving Indian citizens an opportunity to use available financial services to improve their welfare, thereby leading to greater social inclusion in India. The research implication of the findings is that financial inclusion in India remains a fruitful area for academic research. Future research in this area can provide new insights if it broadens our understanding of the positive impact and issues regarding financial inclusion in India. This study has one limitation. It is possible that we may have inadvertently omitted some research studies despite our effort to ensure that the review would be all-inclusive. However, we believe that this review is an accurate and concise representation of the body of research on financial inclusion in India published during the period examined.

Reference

Aggarwal, R. (2014). Financial inclusion in India: Challenges and opportunities. *International Journal of Research*, 1(4), 557-567.

Ananth, S., & Öncü, T. S. (2013). Challenges to financial inclusion in India: The case of Andhra Pradesh. *Economic and Political Weekly*, 77-83.

Arun, T., & Kamath, R. (2015). Financial inclusion: Policies and practices. *IIMB Management Review*, 27(4), 267-287.

Bansal, S. (2014). Perspective of technology in achieving financial inclusion in rural India. *Procedia Economics and Finance*, 11, 472-480.

Baporikar, N. (2021). Fintech challenges and outlook in India. In *Innovative strategies for implementing FinTech in banking* (pp. 136-153). IGI Global.

Bhanot, D., Bapat, V. and Bera, S. (2012). Studying financial inclusion in north-east India. *International Journal of Bank Marketing*, 30(6), 465-484.

Chandran, D. (2011). Financial inclusion strategies for inclusive growth in India. *Available at SSRN 1930980.*

Chattopadhyay, S. K. (2011). Financial inclusion in India: A case-study of West Bengal.

Chakrabarty, K. C. (2011). Financial inclusion and banks: Issues and perspectives. *RBI Bulletin*, November.

Churchill, S. A., & Marisetty, V. B. (2020). Financial inclusion and poverty: a tale of forty-five thousand households. *Applied Economics*, 52(16), 1777-1788.

Dar, A. B., & Ahmed, F. (2021). Financial inclusion determinants and impediments in India: insights from the global financial inclusion index. *Journal of Financial Economic Policy*, 13(3), 391-408.

Demirgüç-Kunt, A., & Klapper, L. F. (2012). Financial inclusion in Africa: an overview. *World Bank policy research working paper*, 6088.

Dixit, R., & Ghosh, M. (2013). Financial inclusion for inclusive growth of India-A study of Indian states. *International Journal of Business Management & Research*, 3(1), 147-156.

Garg, S., & Agarwal, P. (2014). Financial inclusion in India–a Review of initiatives and achievements. *IOSR journal of business and Management*, 16(6), 52-61.

Ghosh, J. (2013). Microfinance and the challenge of financial inclusion for development. *Cambridge journal of economics*, 37(6), 1203-1219.

Ghosh, S., & Vinod, D. (2017). What constrains financial inclusion for women? Evidence from Indian micro data. *World development*, 92, 60-81.

Goel, A. (2023). Trends and reforms of financial inclusion in India. International Review of *Applied Economics*, 1-11.

Govindapuram, S., Bhupatiraju, S., & Sirohi, R. A. (2022). Determinants of women's financial inclusion: evidence from India. *Annals of Public and Cooperative Economics*.

Gupte, R., Venkataramani, B., & Gupta, D. (2012). Computation of financial inclusion index for India. *Procedia-Social and Behavioral Sciences*, 37, 133-149.

Inoue, T. (2019). Financial inclusion and poverty reduction in India. *Journal of Financial Economic Policy,* 11(1), 21-33.

Iqbal, B. A., & Sami, S. (2017). Role of banks in financial inclusion in India. *Contaduría y administración*, 62(2), 644-656.

Kandpal, V., & Mehrotra, R. (2019). Financial inclusion: The role of fintech and digital financial services in India. *Indian Journal of Economics & Business*, 19(1), 85-93.

Kanungo, R. P., & Gupta, S. (2021). Financial inclusion through digitalisation of services for well-being. *Technological Forecasting and Social Change*, 167, 120721.

Kaur, S., & Kapuria, C. (2020). Determinants of financial inclusion in rural India: does gender matter? *International Journal of Social Economics*, 47(6), 747-767.

Khan, H. R. (2011). Financial inclusion and financial stability: are they two sides of the same coin. *Address by Shri HR Khan, Deputy Governor of the Reserve Bank of India, at BANCON*, 1-12.

Kumar, N. (2013). Financial inclusion and its determinants: evidence from India. *Journal of Financial Economic Policy*.

Kumar, R., & Pathak, D. C. (2022). Financial awareness: a bridge to financial inclusion. *Development in Practice*, 32(7), 968-980.

Laha, A., Kuri, D., & Kumar, P. (2011). Determinants of financial inclusion: A study of some selected districts of West Bengal, India. *Indian journal of finance*, 5(8), 29-36.

Lenka, S. K. (2022). Relationship between financial inclusion and financial development in India: Is there any link? *Journal of Public Affairs*, 22, e2722.

Maity, S., & Sahu, T. N. (2022). Financial inclusion in north-eastern region: An investigation in the state of Assam. *Vilakshan-XIMB Journal of Management*, 19(2), 206-221.

Malladi, C. M., Soni, R. K., & Srinivasan, S. (2021). Digital financial inclusion: next frontiers—challenges and opportunities. *CSI Transactions on ICT*, 9(2), 127-134.

Markose, S., Arun, T., & Ozili, P. (2022). Financial inclusion, at what cost? Quantification of economic viability of a supply side roll out. *The European Journal of Finance*, 28(1), 3-29.

Nayak, N. C., Mahakud, J., Mahalik, M. K., Jenamani, M., Samal, A., Sen, S., & Mohanty, A. R. (2024). What determines financial inclusion? A household-level investigation in rural Odisha, India. *Journal of Social and Economic Development*, 1-19.

Ozili, P. K. (2018). Impact of digital finance on financial inclusion and stability. *Borsa Istanbul Review,* 18(4), 329-340.

Ozili, P. K., Ademiju, A., & Rachid, S. (2023). Impact of financial inclusion on economic growth: review of existing literature and directions for future research. *International Journal of Social Economics*, 50(8), 1105-1122.

Ozili, P. K. (2023). Institutional theory of financial inclusion. In *Handbook of Research on Acceleration Programs for SMEs* (pp. 45-53). IGI Global.

Pal, M., Gupta, H., & Joshi, Y. C. (2022). Social and economic empowerment of women through financial inclusion: empirical evidence from India. *Equality, Diversity and Inclusion: An International Journal*, 41(2), 294-305.

Pandey, A., Kiran, R., & Sharma, R. K. (2022). Investigating the impact of financial inclusion drivers, financial literacy and financial initiatives in fostering sustainable growth in North India. *Sustainability*, 14(17), 11061.

Priya, P. K., & Anusha, K. (2019). Fintech issues and challenges in India. *International Journal of Recent Technology and Engineering*, 8(3), 904-908.

Raj, B., & Upadhyay, V. (2020). Role of FinTech in Accelerating Financial Inclusion in India. In *3rd International Conference on Economics and Finance organised by the Nepal Rastra Bank at Kathmandu, Nepal during February* (pp. 28-29).

Rajeswari, P., & Vijai, C. (2021). Fintech industry in India: the revolutionized finance sector. European Journal of Molecular & Clinical Medicin, 8(11), 4300-4306.

Rastogi, S., Suresh, V., & Leonard, D. (2017). Financial Inclusion and Demonetization: An Empirical Study Using Exploratory Factor Analysis. *Indian Journal of Commerce and Management Studies*, 8(1),38-46.

Raichoudhury, A. (2020). Major determinants of financial inclusion: State-level evidence from India. *Vision*, 24(2), 151-159.

Rastogi, S., and Ragabiruntha E. (2018). Financial inclusion and socioeconomic development: Gaps and solution. *International Journal of Social Economics*, 45(7), 1122-1140.

Sathiyan, S., & Panda, P. K. (2016). Financial inclusion in India: An analysis of pattern and determinants. *Indian Journal of Finance*, 10(4), 41-53.

Schuetz, S., & Venkatesh, V. (2020). Blockchain, adoption, and financial inclusion in India: Research opportunities. *International journal of information management*, 52, 101936.

Sethi, D., & Acharya, D. (2018). Financial inclusion and economic growth linkage: Some cross-country evidence. *Journal of Financial Economic Policy*, 10(3), 369-385.

Sharma, D. (2016). Nexus between financial inclusion and economic growth: Evidence from the emerging Indian economy. *Journal of financial economic policy*, 8(1), 13-36.

Sharma, G., & Mathur, M. (2022). Financial Inclusion an Enabler for Growth in Digital India: An empirical Approach. *Journal of Contemporary Issues in Business and Government*, 28(4), 463-481.

Singh, V. K., & Prasad, R. (2021). Diffusion of banking products in financial inclusion linked savings accounts: A case study based on Pradhan Mantri Jan Dhan Yojana in India. *Global Business Review*, 09721509211006866.

Singh, T. (2020). Fintech adoption: a critical appraisal of the strategies of Paytm in India. *IUP Journal of Management Research*, 19(4), 7-17.

Singh, B. P., & Yadava, A. K. (2022). Technical efficiency of financial inclusion and human development: Insights from the Indian states. *Economic Notes*, 51(2), e12199.

Srinivasan, K., Ramesh, K., Gunasekaran, K., & Sivasubramanian, K. (2024). Reforms in Indian Banking Sector: A Paradigm Shift in Growth and Financial Inclusion in India. In *Technology-Driven Business Innovation: Unleashing the Digital Advantage, Volume 1* (pp. 433-439). Cham: Springer Nature Switzerland.

Swamy, V. (2014). Financial inclusion, gender dimension, and economic impact on poor households. *World development*, 56, 1-15.

Thatte, L. R. (2010). Financial inclusion through mobile phone technology: opportunities, challenges and policy options for India. *Mumba*i, SN.

Tikku, S. R., & Singh, A. K. (2023). Role of mobile banking in financial inclusion: evidence from agri traders of India. *International Journal of Electronic Finance*, 12(1), 36-54.

Vijai, C. (2019). FinTech in India–opportunities and challenges. *SAARJ Journal on Banking & Insurance Research*, 8(1), 42-54.

Yadav, P., & Shaikh, I. (2023). Measuring financial resilience with consumer sentiment data from India. *International Journal of Bank Marketing*, 41(5), 1083-1103.