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UNVEILING THE DETERMINANTS OF DIGITAL FINANCIAL INCLUSION IN RURAL INDIA: A CONCEPTUAL FRAMEWORK

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Abstract

Digital financial services are crucial for the overall economic growth of any country. Digital financial inclusion aims to provide financial products and services digitally to the economically underprivileged sections of society. The government has nevertheless taken distinct approaches to promoting digital financial inclusion in India. Digital financial inclusion (DFI) strives to reach vulnerable areas by digital means that lag in assessing financial products and services. To enhance their service delivery and offer better digital services, financial institutions and FinTech companies should use this research to understand the factors influencing the decision to use digital financial services. To extend the theoretical understanding of digital financial inclusion, this study aims to postulate a conceptual framework on determinants of digital finances in rural areas through a critical literature review. The findings discovered that perceived usefulness, perceived ease of use, structural assurance, perceived risk, resource-facilitating conditions, technology-facilitating conditions, government support, and social influence are the major determinants of digital financial inclusion in rural areas, which give rise to the behaviour intention which ultimately leads to the usage behaviour. The study adds to the knowledge of digital financial inclusion.

Keywords: Digital Financial Inclusion, Digital Financial Services, Behavioral Intention, Usage behavior, Rural Communities.

Introduction

India is one of the largest nations, abundant in marble, minerals, and tourists. However, poverty, poor economic growth, and lack of access to financial institutions plague a well-known tribal and rural area (Oskarsson, 2018). A broad choice of affordable and appropriate financial services is needed to meet a wide range of financial needs, including simple access to savings accounts, microcredits, insurance, payment and transfer services, etc. (Gautam & Rawat, 2017). Financial technology companies (FinTechs) emerged during the 2007-2008 global financial crisis, revolutionizing the financial industry with novel innovations like information technology and electronic money transfer systems. The expansion of mobile networks in India and payments banks have improved efficiency and reduced costs, blurring the boundaries between business and technology (Goswami et al., 2023).

Financial inclusion is a relatively new idea that works with financial institutions to reach the unreached population with financial services to support the nation's sustainable growth (Bihari, 2011). Every segment of the economy should have easy access to formal financial institutions and services, known as financial inclusion (Paramasivan & Ganeshkumar, 2013). Financial inclusion has two purposes: it links the economically disadvantaged to economic progress and attracts more people to the financial system and the economy. By funding growth elements like mobilizing savings and giving the impoverished access to entrepreneurship chances, inclusive financial advances lessen poverty by lowering vulnerability and enhancing welfare (Schuetz & Venkatesh, 2020; Kim et al., 2018). Financial inclusion has greatly improved the efficiency of financial services and decreased the cost of financial supply using digital technology. In order to advance financial inclusion, digital technology is supported by the Global Partners of Inclusive Finance (GPFI) (Liu et al., 2021). According to European Commission, "Financial literacy means the knowledge and skills needed to make important financial decisions. Every day, thousands decide where to open a bank account, which mortgage to choose, where to invest their money and how to save for retirement". Financial literacy is crucial for financial inclusion and addressing imbalances in product

access. It helps consumers compare and select the best products for their needs, empowering them to exercise their rights and responsibilities. Financial literacy is tailored to clients' specific contexts, addressing daily financial concerns and spanning informal and formal financial sectors, supporting access to diverse financial services(Cohen & Nelson, 2011).

In order to push the underserved rural people into the mainstream of financial inclusion, steps have been taken over the last five years to develop the financial sector and lead the nation into digital financial inclusion through practical, safe, and affordable means (Global Partnership for Financial Inclusion (GPFI, 2016). Digital financial services offer innovative solutions to address financial exclusion by overcoming geographical restrictions, reducing transaction costs, enhancing transparency, and increasing trust in financial systems. They can reduce informational asymmetries, improve financial autonomy and privacy, and potentially reduce the risk of cooption and appropriation (Gammage et al., 2017). While digital finance is explored independently, most scholars focus on the factors influencing financial inclusion. The growth of regions that are not served by financial services can be aided by digital financial inclusion (Liu et al., 2021). The rapid development of digital technologies has recently contributed to the financial industry's significant transformation. Digital finance has transformed conventional financial systems, bringing new opportunities and difficulties for people, companies, and the global economy (Feyen et al., 2021). The goal of common prosperity can be achieved to a significant extent through the use of digital inclusive finance (Zhao & Jiao, 2024). In addition to improving the financial system's transparency and inclusivity, digital financial inclusion provides underprivileged areas a chance to break free from financial isolation (Li, 2024).

Giving underbanked and marginalized people access to affordable digital financial services is called "digital financial inclusion." The global bank defined digital financial inclusion as "the placement/use of cost-saving digital means to reach the financially excluded unprivileged population." (World Bank, 2014). In order to reach a large number of new consumers and give them access to the official financial sector, both banks and non-banks have recently begun to offer digital financial services. It can also be described as a means for citizens to have digital access to official financial services. Since a digital account can be accessed from anywhere, there are no geographic restrictions on digital financial inclusion (Aziz & Naima, 2021). Although numerous areas of the nation lack a real banking infrastructure, using a digital wallet will let you get around this (Agur et al., 2020). Additionally, lowering the investments made to make the services available lowers the cost of the services. Over 80% of people have bank accounts, and as of 2022, more than 600 crore digital payments are made monthly (Kamboj, 2023).

Most without bank accounts come from rural areas and developing nations (Demirgüç-Kunt & Klapper, 2013). Numerous causes of financial exclusion were identified in the literature at the time. Financial exclusion can be caused by several factors, including low income, unemployment, low education, financial illiteracy, unsuitable financial services, the cost of accessing and using financial services, a lengthy documentation process, lack of trust, scarce financial resources, and poverty (Sinclair, 2001). Integrating vulnerable groups into the financial system enhances sustainable development and financial stability. Therefore, to promote sustainable, inclusive growth and eradicate poverty, ensuring appropriate, suitable financial services for vulnerable people at lower rates is now a priority of major governments, banks, financial institutions, and international organizations (Raju, 2023).

2. Objectives of the Study

Many empirical studies focus on studying the determinants of technology usage. However, very few studies have reviewed the current literature on the determinants of digital financial inclusion in rural India. Using an in-depth literature analysis, the current study aims to investigate the determinants of digital financial inclusion in rural areas.

3. Methodology

The current conceptual study examines the major determinants of digital financial inclusion. The study was conducted in rural India. The work has been indexed in well-known databases (such as Scopus, Web of Science, etc.) For the accomplishment, secondary sources include research papers, dissertations, theses, conference papers, websites, and reports.

4. Literature Review

4.1 Digital Financial Inclusion

According to RBI, "Financial inclusion is the process of ensuring access to appropriate financial products and services needed by vulnerable groups, such as weaker sections and low-income groups, at an affordable cost, fairly and transparently, by mainstream institutional players." According to the Rangarajan Committee (2008), "Financial inclusion is the process of ensuring timely access to financial services and adequate credit where needed by vulnerable groups at an affordable cost." Financial inclusion aims to support the country's sustainable development by enabling financial institutions to offer financial services to the underprivileged. Put differently, it refers to how everyone involved in the economy uses formal financial services or systems on a large scale. To guarantee greater access to and involvement in the financial system, digital financial inclusion, a subset of financial inclusion, emphasizes integrating digital platforms and technology into financial services. Promoting financial access and empowerment is the goal of both ideas. According to the World Bank (2014), "deployment of cost-saving digital means to reach currently financially excluded and underserved populations with a range of formal financial services suited to their needs that are responsibly delivered at a cost affordable for customers and sustainable for providers is Digital Financial Inclusion." Information and communication technology (ICT) plays a major role in the scope and utilization of financial services by formerly marginalized people under the framework of digital financial inclusion (Lauer &

Lyman, 2015; Wang & He, 2020). Chinoda & Kapingura (2024) explored the impact of institutions and governance on digital financial inclusion and economic growth in Sub-Saharan Africa from 2014 to 2020, finding a significant positive effect of institutional quality and governance, along with trade and population growth.

Svotwa et al. (2023) looked at the policies for digital financial inclusion in South Africa, Zimbabwe, Namibia, Botswana, and urban and rural areas. Rural people are not financially included because of their spending habits and marginalization. Therefore, the government should formulate distinct policies for the rural community. Ravnbøl (2023) researched digital financial inclusion in European nations. It focuses on low-income Roma families using digital banking cards while they travel to Denmark to work in the black market and at home in Romania. Without a comprehensive strategy for providing "de facto access" for marginalized communities that takes into account all access variables, digital financial activities have the potential to further isolate them from the global economy. Zhu (2022) investigated the obstacles that restrict China's rural digital financial inclusion, attempted to assess the current state of rural digital financial inclusion, and offered recommendations for future developments in this area. Agwu (2021) assessed how much technology may contribute to closing the gap between rural development and financial inclusion. The survey found that businesses and people find comfort in the customary human touch connected to the unorganized sectors. The informal sector has closer client ties than the numerous paperwork requirements in conventional financial institutions.

4.2 Determinants of Digital Financial Inclusion

Raju (2023), using a self-designed research model, looked into the major factors that influence the adoption and continued usage of digital financial services in rural areas. The adoption of digital financial services was found to be significantly influenced by a number of factors, including perceived risk, self-efficacy, relative advantage, ease of use, and subjective norms. Majumdar & Pujari's (2022) study focused on the United Arab Emirates while examining customer acceptability of mobile apps. Utilizing the Technology Acceptance Model, this goal was achieved. Perceived usefulness and informational content were the main criteria determining the acceptance and use of mobile banking apps. Okaily et al. (2022) examined the factors influencing the adoption of digital financial inclusion. The objective was achieved by using the UTAUT2 model, which included financial awareness as a moderator variable and perceived privacy and security as independent variables. The results illustrated the significance of the proposed linkages between behavioural intention to utilize digital financial services and the subjective norm. It was discovered that important moderators included pricing value, perceived security, perceived privacy, performance expectations, and financial understanding. Bhatt & Nagar (2021) analyzed the effects of performance expectancy and trust as mediating variables. In addition, innovation served as a moderating factor. The study discovered that factors directly influencing the adoption of mobile banking were simplicity of use, the mobile environment, perceived responsiveness, bank image, perceived security, perceived risk, performance advantages, social impact, and hedonic incentives. The study also demonstrated moderating and mediating effects. Chawla & Joshi (2019) investigated the factors influencing Indian customers' attitudes and intentions to adopt mobile wallets. The theories were tested using PLS-SEM. It was discovered that customer attitudes and intentions about the use of mobile wallets are strongly influenced by perceived ease of use (PEOU), perceived usefulness (PU), trust, security, facilitating factors, and lifestyle compatibility. Perceived usefulness (PU), perceived ease of use (PEU), perceived credibility (PC), structural assurance (SA), trust, usage limitations, accessibility, convenience of use, and intention to use were found to be much more predictable in predicting consumers' behavior intention and actual usage (Priya et al., 2018; Sikdar & Makkad, 2015). Kumar & Madhumohan (2014) conducted research on the variables influencing online banking in Indian cities. A TAM model extension was employed in the investigation. The study revealed that the primary elements influencing the adoption of Internet banking in India were perceived usefulness, perceived ease of use, social impact, awareness, the quality of the Internet connection, and computer self-efficacy.

5. Conceptual Framework

The research demonstrated that major determinants affecting digital financial inclusion are perceived usefulness, perceived ease of use, structural assurance, perceived risk, resource-facilitating conditions, technology-facilitating conditions, government support and social influence.

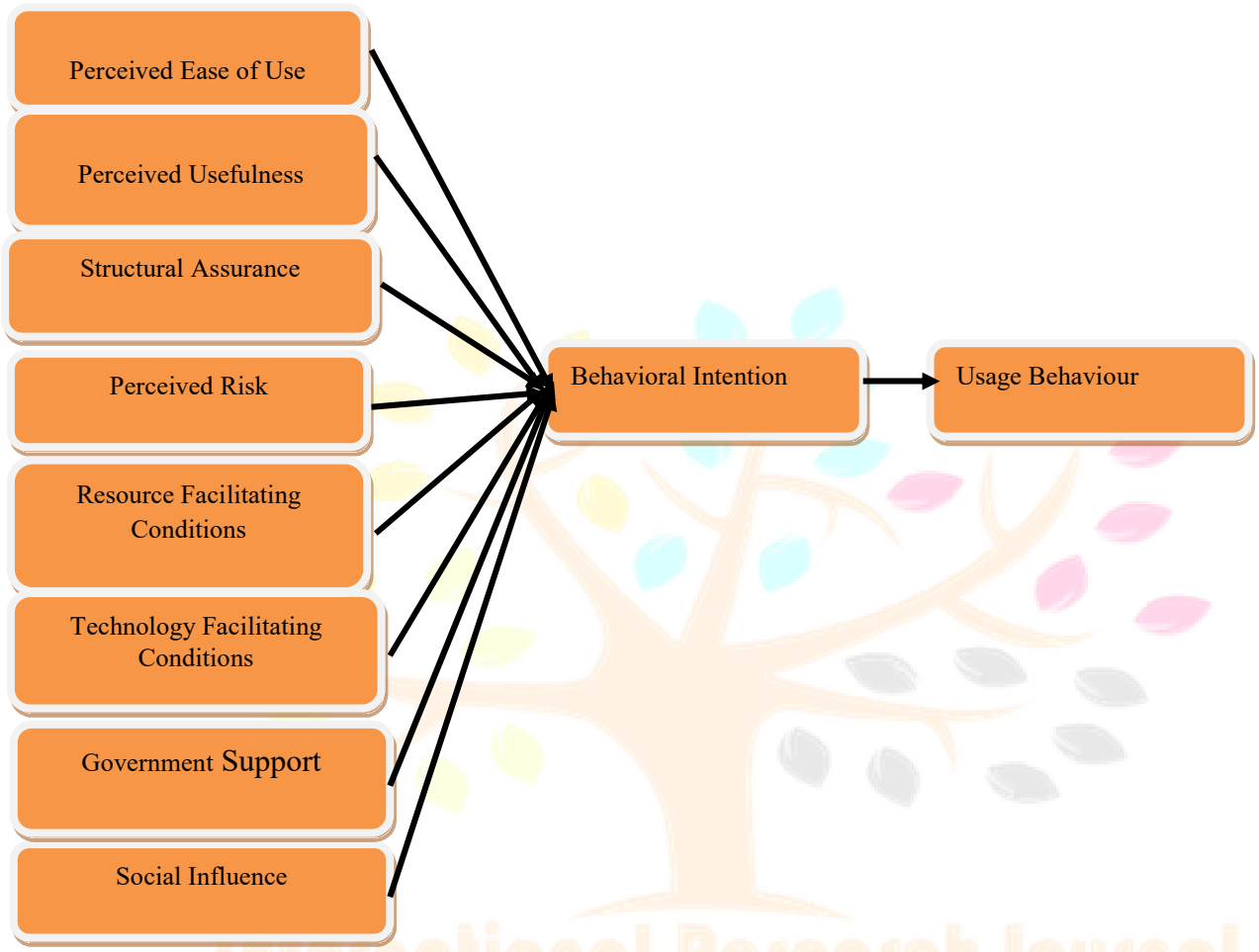

Figure 1:Research Framework

Source: Compiled by the Researcher

6. Major Determinants of Digital Financial Inclusion

Perceived risk, structural assurance, perceived usefulness, perceived ease of use, resource facilitation conditions, government support, and IT support are some factors that affect rural residents' decisions to use digital financial services.

6.1 Perceived Usefulness

Perceived usefulness refers to how much a person believes using a technology would enhance their performance (Davis et al., 1989). The most important aspect influencing a person's intention to utilize technology is their perception of its utility. Perceived usefulness is a subjective likelihood that technology can improve a customer's chances of achieving his goal (Luna et al., 2018). Thus, PU is defined as the benefits customers believe come with utilizing mobile banking to carry out financial operations (Aldás-Manzano et al., 2009). Numerous studies (Al-Emran & Griffy-Brown, 2023; Owusu et al., 2021; Gu et al., 2009) demonstrate that the behavioural intention to use digital items is greatly impacted by perceived usefulness.

6.2 Perceived Ease of Use

PEOU refers to "the degree to which a user believes that using a particular service would be free of effort" (Davis, 1989). Stated differently, it is the work necessary to make technology simpler. PEOU, as seen through a view of users' acceptance and adoption of technology literature, characterizes the degree to which a user thinks utilizing a specific technological system will be devoid of significant obstacles. Therefore, when users think a technology is simpler to use than another, they are more likely to accept it (Owusu et al., 2020). Previous research has demonstrated that the behavioural intention to use digital financial services is strongly influenced by perceived ease of use (Hasyim et al., 2023; Chitungo and Munongo , 2013; Sheng et al., 2011).

6.3 Structural Assurance

A person's conviction that "guarantees, regulations, promises, legal recourse, or other procedures are in place to promote success" is structural assurance (Mcknight et al., 2002). Consumer think that because of technological and legal resources, they won't lose any privacy or financial security when using digital financial services (Naruetharadhol et al., 2021).This is a crucial part of MB. The infrastructure is based on cellular data points and wireless networks, both of which have a history of being thought to be susceptible to hacker attacks and information interception. As a result, robust structural guarantees like SSL certification and legal requirements are crucial for guaranteeing security and serve as the cornerstone upon which clients may establish confidence in MB (Oliveira et al., 2014).

6.4 Perceived Risk

Uncertainty regarding the possible results of conduct is the definition of perceived risk (Forsythe & Shi, 2003). The inherent hazards of new products heighten the resistance to their acceptance (Aldás-Manzano et al., 2009). The research has acknowledged that risk is important for applications using digital services, partly because mobility heightens the security threat and, compared to traditional banking approaches,4). It is anticipated that adoption of digital technologies will be limited in environments where risk perception is high. Therefore, a person's behavioural intention to use digital financial services may be negatively correlated with their risk perception(Sohn et al., 2016). Consumer desire to use digital financial services is influenced by perceived risk, which also influences perceived ease of use (Nguyen & Nguyen, 2017).

6.5 Resource-Facilitating Conditions

The availability of technology and resources needed to carry out a certain activity is a resource-facilitating condition (Triandis, 1979). Taylor & Todd (1995) assert that resources such as money, time, and technology will benefit if they are available. Since this factor was initially established and analyzed for the adoption of technology by organizational users, it has not been extensively studied in the context of individual or group users for m-payment adoption. The behavioural intention towards digital technologies is influenced by conditions that facilitate access to resources (Alruwais et al., 2016; Shih & Fang, 2004).

6.6 Technology-Facilitating Conditions

The infrastructure that makes the technology easy is called "technology facilitating conditions" (Nasri & Charfeddine, 2012). It considers network availability, precision, and Internet at the right speed. With the increasing viability of e-commerce applications like Internet banking services, technology support (TS) becomes more quickly and freely available (Shih & Fang, 2004). This would apply to the infrastructure and technological resources that are accessible for use on the Internet. The behavioural intention to use digital tools is significantly influenced by technology-facilitating situations (Surjaatmadja, 2022).

6.7 Government Support

People's usage of new technology can be greatly encouraged by the government (Brown et al., 2004). It is feasible to determine how much support people feel they are receiving. An individual's likelihood of adopting Internet banking increases with the perceived level of government support. Offering the required assistance can be considered a significant factor in adopting technology (Tan &Teo, 2000). Support from the government can, therefore, aid in assessing the intention to adopt digital tools (Nasri & Charfeddine, 2012).

6.8 Social Influence

Social influence is the notion that significant people, such as friends, family, and co-workers, think a certain technology is appropriate for them to utilize (Ventkash et al., 2012). Social influence has a significant impact on consumers' intentions to utilize digital financial services (Emon, 2023; Sivathanu, 2019), which in turn influences consumers' actual use of these services. The Network Effect Theory (Liebowitz & Margolis, 1994) states that a rise in (Mobile Payment Service) usage may directly raise the benefits of MPS (Mobile Payment Service) use for other users. As a result, if a sufficient number of members of a social circle adopt a digital financial service, the circle as a whole is likely to do so over time. Several studies have examined social influence, and the findings indicate that social influence has a favourable impact on people's adoption of technology **(**Granić , 2024; Hsu & Lu, 2004; Lucas & Spitler, 2000).

6.9 Behavioral Intention

People's desire to perform a specific activity is what forms their behavioural intention, which is influenced by a variety of motivational factors (Ajzen, 1991). Users' intention to adopt or not adopt the new technology and utilize it depends on their knowledge of the new system's features, benefits, operations, and the opinions of others (Wang et al, 2006). Numerous studies demonstrate that purpose has a major influence on how digital technologies are used (Picoto & Pinto, 2021; Patil et al., 2020).

6.10 Usage behaviour

Usage behaviour is how people use technology once their interest in it has been aroused. The user is continuously interested in using the technology. Accordingly, the adoption of technology comes after behavioural intention (Jouda et al., 2020; Moya et al., 2018; Venkatesh et al., 2003).

Conclusion

The current study thoroughly examined the literature in the context of digital financial inclusion. The multidimensional approach to assessing digital financial inclusion in rural areas that many studies have offered is clarified in this conceptual article. According to the literature evaluation, the major factors that have received a lot of attention in the context of rural digital financial inclusion are- perceived ease of use, perceived usefulness, structural assurance, perceived risk, resource-facilitating conditions, technology-facilitating conditions, government support and social influence which ultimately leads towards behavior intention and usage behavior to use the digital financial services . There are extremely few studies that cover every aspect of digital financial inclusion. This review adds significant value to the existing literature on digital financial inclusion. The empirical investigation of the dimensions identified may give comprehensive knowledge about the role of these factors in the context of digital financial inclusion.

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