“Perception vs. reality: Analysing the nexus between financial literacy and fintech adoption”

AUTHORS
Shamli Prabhakaran R
Mynavathi L. D

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PERCEPTION VS. REALITY: ANALYSING THE NEXUS BETWEEN FINANCIAL LITERACY AND FINTECH ADOPTION

Abstract

Fintech has revolutionized the financial services sector, fundamentally transforming how individuals and businesses manage their finances. However, effective and responsible utilization of these innovative services may require a certain degree of financial competence. To explore this possibility, this study investigates the nexus between financial literacy and fintech usage in the Indian context, considering two distinct measures of financial literacy. Primary data were collected conveniently from 391 respondents through a cross-sectional survey. Probit regression was applied to analyze the relationship between the two dimensions of financial literacy and the adoption of fintech services across three segments: mobile banking, mobile payments, and digital lending. The findings reveal a positive relationship between individuals’ subjectively perceived financial literacy and their propensity to use all three fintech services. Conversely, objectively measured financial literacy demonstrates a positive association only with the likelihood of using mobile banking. The study also identifies demographic characteristics as contributing factors to variations in fintech adoption. The study’s findings hold value for policymakers and fintech service providers, as they underscore the importance of enhancing individuals’ subjective perceptions of their financial abilities to promote wider adoption of fintech services.

Keywords

fintech, mobile banking, mobile payments, digital lending, financial literacy

JEL Classification

G53, D14, O33

INTRODUCTION

The emergence of Financial Technology (FinTech) has transformed the global financial services landscape in recent years. Puschmann (2017) defines fintech as the innovative utilization of technology to deliver digital solutions and services within the financial sector. It encompasses an array of offerings such as mobile payment systems, investment platforms, robo-advisory services, crowdfunding, peer-to-peer lending, blockchain technology, and various other digital solutions (Thakor, 2020). These technological innovations have not only increased the efficiency of transactions and reduced costs, but have also democratized financial services, making them accessible to a broader spectrum of society. This democratization has had a pronounced effect in developing countries, where fintech’s transformative power has played a pivotal role in bridging financial gaps and providing greater access to previously underserved populations. India stands as an exemplar of effectively leveraging fintech’s potential to enhance financial inclusion. Over the last decade, the country has firmly established itself as a global frontrunner in the fintech arena, boasting an impressive 87% adoption rate and an ever-expanding digital infrastructure (Business Today, 2021). Its fintech landscape rivals that of developed countries, encompassing various domains like neo-bank-
ing, digital payment systems, alternative lending, digital wealth management, insurance technology, and regulatory technology. As fintech continues to reshape the financial industry, it becomes crucial to explore the underlying factors that drive its adoption.

Researchers have extensively delved into the adoption of fintech from the users’ perspective, often drawing upon established theoretical models like the Technology Acceptance Model (TAM) and the Unified Theory of Acceptance and Use of Technology (UTAUT). Fintech, despite being a technological innovation, is primarily intended to facilitate and improve various aspects of financial management. As such, the decision to adopt fintech is contingent upon factors that extend beyond technology, potentially intertwined with one’s level of financial literacy (Königsheim et al., 2017). Financial literacy, denoting one’s proficiency in financial matters, is a vital factor in enabling individuals to make informed financial decisions and attain economic well-being. However, the exploration of fintech adoption dynamics frequently overlooks this vital aspect. Given India’s burgeoning fintech industry and its diverse populace with varying financial competencies and needs, investigating the interplay between financial literacy and fintech usage takes on immense significance. Understanding this relationship can shed light on the factors that facilitate or hinder individuals’ engagement with these innovative services, ultimately contributing to the development of effective strategies and policies to improve fintech adoption and, by extension, promote financial inclusion.

1. LITERATURE REVIEW AND HYPOTHESES

Financial literacy has been a focal point of research for decades, owing to its substantial impact on the economic well-being of individuals as well as societies (Lusardi, 2019). A fundamental requirement for making sound financial choices, financial literacy is aptly defined as “one’s ability to process economic information and make informed decisions about financial planning, wealth accumulation, debt, and pensions” (Lusardi & Mitchell, 2014). Current literature in this area largely focuses on the relationship between financial literacy and financial behaviors or economic outcomes. Yoong (2010) identified a causal link between individuals’ financial literacy and their inclination to participate in equity markets. Allgood & Walstad (2013) found that financial literacy had a significant effect on responsible credit card usage and prudent borrowing behaviors. It is also positively connected to having precautionary savings (Babiarz & Robb, 2014) and planning for retirement (Klapper & Panos, 2011). As a result of engaging in such healthy financial behaviors, the financially literate tend to accumulate more wealth over their lifetime (Behrman et al., 2012) and experience heightened financial well-being (Adam et al., 2017).

While the economic importance of financial literacy has been indisputably established, a notable challenge persists in determining the most effective way to measure financial literacy due to the absence of a standardized definition (Hung et al., 2009). Evaluation of financial literacy has hitherto involved the adoption of both objective and subjective measurement approaches (Anderson et al., 2017; Lusardi & Mitchell, 2009). Objective financial literacy (hereafter referred to as OFL) is the quantifiable assessment of an individual’s financial knowledge through testing, while subjective financial literacy (hereafter referred to as SFL) is the self-reported measure of one’s own financial capabilities (Nejad & Javid, 2018). While Robb and Woodyard (2011) asserted that subjectively perceived financial knowledge might surpass objectively measured financial knowledge in predicting financial behaviors, Allgood and Walstad (2016) advocated for a comprehensive understanding. They stated that examining financial literacy from both objective and subjective perspectives is crucial to capture a more holistic view of one’s competence and confidence in financial affairs rather than relying solely on any single measure.

The significance of financial literacy has grown even more pronounced in recent times as the advent of fintech has reshaped the landscape of personal financial management (Hasler et al., 2018). While the convergence of finance and technology was expected to enhance customer experience by streamlining processes and expanding access
to financial services, it also places a heightened demand on users to assume higher responsibility when making complex financial decisions and navigating various risks (Ebrahim et al., 2021; Morgan et al., 2019). This shift towards greater user autonomy highlights the necessity of having a solid foundation of financial literacy. However, within the realm of research exploring the antecedents to fintech adoption (Hu et al., 2019; Singh et al., 2020), not many studies have considered the role of financial literacy.

Morgan and Trinh (2019) conducted pioneering research on this subject in Lao PDR, revealing a positive link between financial literacy and fintech awareness, although no significant impact on fintech adoption was observed. In contrast, their findings from Vietnam demonstrated a positive relationship between financial literacy and both awareness and adoption of fintech products (Morgan & Trinh, 2020). Similar patterns were discerned by Yoshino et al. (2020) in Japan and Andreou and Anyfantaki (2021) in Cyprus, where higher financial literacy corresponded to an increased likelihood of using mobile payments and internet banking. Jünger and Mietzner (2020) postulated that trust in technologies and financial expertise notably impact the propensity of Germans to switch from traditional banks to new age fintech companies. Further expanding this line of enquiry in Indonesia, Setiawan et al. (2021) found that individuals’ financial literacy was directly and indirectly associated with fintech adoption, mediated by their innovativeness. However, conflicting findings were reported by Chan et al. (2022), who proposed that financial knowledge negatively affects people’s trust toward fintech innovation, potentially inducing skepticism. It is important to note that these studies focused only on a single measure of financial literacy. To attain an expansive understanding of the link between financial literacy and fintech adoption, it becomes imperative to consider both objective and subjective components of financial literacy. Examining both OFL and SFL allows for a more nuanced assessment of how financial literacy shapes individuals’ willingness and propensity to adopt fintech services.

Fan (2022) examined the connection between financial proficiency in the investment domain and the adoption of mobile investment technology. The results highlighted a positive association between subjective investment literacy and mobile investment decision-making and trading. On the contrary, objective investment literacy exhibited a negative correlation with these behaviors. Nguyen (2022) contributed to this discourse by emphasizing the pivotal role of SFL in influencing fintech usage. The findings underscored that individuals’ perception of their financial knowledge held a more substantial sway on fintech adoption than their actual financial knowledge. Even in the case of technology-based novel investment options like cryptocurrencies, SFL emerged as a stronger predictor of investment behavior compared to OFL (Zhao & Zhang, 2021). These observations underline the prominence of individuals’ confidence and self-perceived competence in driving their engagement with technology-intensive financial products.

Numerous studies have emphasized the greater explanatory power of SFL in understanding and predicting financial behaviors (Riitsalu & Murakas, 2019; Woodyard & Robb, 2016). However, it is crucial to acknowledge that the number of studies exploring fintech adoption within this context is relatively limited, restricting the generalizability of their findings. The dearth of studies and conflicting findings highlight a noticeable research gap in the field, indicating the need for further investigations to yield a more comprehensive understanding of the interplay between the dual facets of financial literacy and fintech adoption. As such, this study endeavors to analyze the intricate relationship between both dimensions of financial literacy and the adoption of fintech services. For this reason, the following hypotheses are proposed:

\[ H_1: \text{Objective financial literacy is positively associated with fintech adoption.} \]

\[ H_2: \text{Subjective financial literacy is positively associated with fintech adoption.} \]

2. RESEARCH METHOD

The study adopts a survey method to explore the nexus between financial literacy and fintech adoption. A cross-sectional survey was conducted online using convenience sampling to gather data.
The study focused on individuals aged 21 years or older residing in India. Prior to participation, respondents were informed about the voluntary nature of the survey and provided with an assurance of anonymity. The data collection process involved the distribution of a digital questionnaire consisting of three sections: sociodemographic characteristics, fintech adoption, and financial literacy. Out of the initial 416 responses received, incomplete responses were excluded, resulting in a final sample of 391. The Statistical Package for Social Sciences (SPSS) software was then used to analyze the collected data. The following equation was estimated:

\[ F_i = \beta_0 + \beta_1 OFL_i + \beta_2 SFL_i + \beta_3 X_i + \varepsilon \]  

(1)

The dependent variable \((F)\) is the adoption of fintech services by individual \(i\), specifically in the areas of mobile banking, mobile payments, and digital lending. So, three alternative values of \(F\) are estimated. Adoption for each service was measured by a binary variable, coded 1 if respondents use that particular service, and 0 if they do not. \(OFL\) and \(SFL\) are the main predictors, representing the individual’s OFL score and SFL rating, respectively. OFL was measured using a set of five questions on fundamental concepts of finance that have been previously validated in the literature. The extensive replication and adaptation of these questions have led to their collective recognition as the “Big 5” (Hastings et al., 2013). The sum of correct answers depicts each individual’s OFL score. SFL was assessed by having the respondents rate the following statements on a 5-point Likert scale, ranging from “Strongly disagree” to “Strongly agree”:

1. Compared to most others, I know more about managing personal finances.
2. Others often ask me for financial advice.
3. I feel very confident in my knowledge of financial matters.

An average scale was then constructed by taking the mean of the individual item scores for each participant. Ranging from 1 to 5, a higher value signifies a greater level of SFL. Reliability analysis demonstrated a strong internal consistency, as denoted by a Cronbach’s coefficient alpha of 0.961. \(X_i\) is a vector of variables that could affect the dependent variable, such as respondents’ gender, age group, place of residence, educational level, occupation, annual income, and whether they had received financial education at college or workplace. The variables age, place of residence, education, occupation, and income are coded as categorical variables. Gender and financial education are binary variables, coded 1 if the respondent is male and has received financial education, and 0 otherwise. \(\varepsilon\) is the error term. Given the dichotomous nature of the dependent variable, Probit regression was deemed suitable for the analysis.

3. RESULTS

An overview of the sample’s summary statistics is presented in Table 1 – 54.5% of the sample identified as male and 45.5% as female. Based on the respondents’ age, the sample was divided into four groups corresponding to different generations. Baby boomers accounted for 13% of the sample, Generation X accounted for 12.5%, Generation Y/Millennials accounted for 39.1%, and Generation Z accounted for 35.3%. In terms of geographical distribution, 10.2% of participants resided in rural areas, 27.9% were from semi-urban regions, 32% were from urban areas, and 29.9% were from metropolitan areas. The majority of the sample had college-level education, with 51.4% being undergraduates and 35.8% being postgraduates or higher. In the occupation category, 47.1% engaged in salaried employment, 20.2% were students, 19.4% were unemployed or retired, and 13.3% were self-employed. 29.7% of the sample had an annual income of less than INR 2,50,000, while 9.5% belonged to the highest income bracket of more than INR 15,00,000. Less than one-fifth of the sample reported receiving financial education from their school or workplace. The results also reveal that 63.2% of the respondents reported using mobile banking services, and 77.5% reported using mobile payment services. The high percentage of respondents using mobile payments suggests a growing reliance on fintech solutions, reflecting the increasing trust and acceptance of mobile technology as a secure and convenient means of conducting financial transactions.
transactions. In contrast, digital lending services were less commonly adopted, with only 23.8% of the sample reporting their usage.

Table 1. Summary statistics

<table>
<thead>
<tr>
<th>Respondents</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>178</td>
<td>45.5</td>
</tr>
<tr>
<td>Male</td>
<td>213</td>
<td>54.5</td>
</tr>
<tr>
<td>Generation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Baby boomers (Born from 1946 to 1964)</td>
<td>51</td>
<td>13</td>
</tr>
<tr>
<td>Generation X (1965 to 1980)</td>
<td>49</td>
<td>12.5</td>
</tr>
<tr>
<td>Generation Y (1981 to 1996)</td>
<td>153</td>
<td>39.1</td>
</tr>
<tr>
<td>Generation Z (Born after 1996)</td>
<td>138</td>
<td>35.3</td>
</tr>
<tr>
<td>Place of residence</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rural</td>
<td>40</td>
<td>10.2</td>
</tr>
<tr>
<td>Semi-urban</td>
<td>109</td>
<td>27.9</td>
</tr>
<tr>
<td>Urban</td>
<td>125</td>
<td>32</td>
</tr>
<tr>
<td>Metropolitan</td>
<td>117</td>
<td>29.9</td>
</tr>
<tr>
<td>Education levels</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Highschool</td>
<td>32</td>
<td>8.2</td>
</tr>
<tr>
<td>Undergraduate</td>
<td>201</td>
<td>51.4</td>
</tr>
<tr>
<td>Postgraduate or higher</td>
<td>140</td>
<td>35.8</td>
</tr>
<tr>
<td>Other professional courses</td>
<td>18</td>
<td>4.6</td>
</tr>
<tr>
<td>Occupation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unemployed or retired</td>
<td>76</td>
<td>19.4</td>
</tr>
<tr>
<td>Student</td>
<td>79</td>
<td>20.2</td>
</tr>
<tr>
<td>Self-employed</td>
<td>52</td>
<td>13.3</td>
</tr>
<tr>
<td>Employed for salary or wages</td>
<td>184</td>
<td>47.1</td>
</tr>
<tr>
<td>Annual Income</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less than INR 2,50,000</td>
<td>116</td>
<td>29.7</td>
</tr>
<tr>
<td>INR 2,50,001 – 5,00,000</td>
<td>85</td>
<td>21.7</td>
</tr>
<tr>
<td>INR 5,00,001 – 7,50,000</td>
<td>62</td>
<td>15.9</td>
</tr>
<tr>
<td>INR 7,50,001 – 10,00,000</td>
<td>49</td>
<td>12.5</td>
</tr>
<tr>
<td>INR 10,00,001 – 15,00,000</td>
<td>42</td>
<td>10.7</td>
</tr>
<tr>
<td>More than INR 15,00,000</td>
<td>37</td>
<td>9.5</td>
</tr>
<tr>
<td>Financial education</td>
<td>77</td>
<td>19.7</td>
</tr>
<tr>
<td>Usage of fintech services</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mobile banking</td>
<td>247</td>
<td>63.2</td>
</tr>
<tr>
<td>Mobile payments</td>
<td>303</td>
<td>77.5</td>
</tr>
<tr>
<td>Digital lending</td>
<td>93</td>
<td>23.8</td>
</tr>
</tbody>
</table>

Respondents had an average OFL score of 2.8 out of 5, indicating a moderate level of financial knowledge. In contrast, the average SFL score was 3.58 out of 5, reflecting a relatively higher level of perceived financial knowledge. This discrepancy suggests that respondents may possess a greater belief in their financial abilities than what is captured by objective assessments, implying the presence of the Dunning-Kruger effect, a phenomenon in which individuals with limited expertise tend to overestimate their competence.

Table 2. Probit regression results

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mobile banking (1)</th>
<th>Mobile payments (2)</th>
<th>Digital lending (3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Objective Financial Literacy</td>
<td>0.185** (0.0788)</td>
<td>−0.127 (0.0846)</td>
<td>−0.105 (0.1013)</td>
</tr>
<tr>
<td>Subjective Financial Literacy</td>
<td>0.852*** (0.1125)</td>
<td>0.886*** (0.1273)</td>
<td>1.344*** (0.2037)</td>
</tr>
<tr>
<td>Male</td>
<td>−0.203 (0.2113)</td>
<td>−0.335 (0.2125)</td>
<td>0.89*** (0.2538)</td>
</tr>
<tr>
<td>Generation (reference group: Baby boomers)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Generation X</td>
<td>−1.532*** (0.4884)</td>
<td>0.596 (0.4247)</td>
<td>0.74 (0.9264)</td>
</tr>
<tr>
<td>Generation Y</td>
<td>−1.193*** (0.4374)</td>
<td>0.155 (0.4304)</td>
<td>2.298*** (0.8482)</td>
</tr>
<tr>
<td>Generation Z</td>
<td>−0.611 (0.4796)</td>
<td>0.972** (0.4941)</td>
<td>2.228*** (0.8516)</td>
</tr>
<tr>
<td>Place of residence (reference group: rural)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Semi-urban</td>
<td>−0.112 (0.3158)</td>
<td>0.314 (0.3013)</td>
<td>0.176 (0.5283)</td>
</tr>
<tr>
<td>Urban</td>
<td>−0.045 (0.334)</td>
<td>1.025*** (0.3181)</td>
<td>0.423 (0.4994)</td>
</tr>
<tr>
<td>Metropolitan</td>
<td>0.224 (0.348)</td>
<td>0.884*** (0.3443)</td>
<td>0.99* (0.5063)</td>
</tr>
<tr>
<td>Education levels (reference group: high school)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Undergraduate</td>
<td>1.053** (0.4158)</td>
<td>−0.54 (0.4021)</td>
<td>−0.113 (0.6565)</td>
</tr>
<tr>
<td>Postgraduate or higher</td>
<td>1.283*** (0.4493)</td>
<td>−0.617 (0.4229)</td>
<td>0.046 (0.693)</td>
</tr>
<tr>
<td>Other professional courses</td>
<td>2.609*** (0.8193)</td>
<td>−0.979* (0.5821)</td>
<td>0.059 (0.7227)</td>
</tr>
<tr>
<td>Occupation (reference group: unemployed)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Student</td>
<td>−1.087*** (0.3609)</td>
<td>−0.285 (0.3777)</td>
<td>−0.538 (0.5065)</td>
</tr>
<tr>
<td>Self-employed</td>
<td>−0.397 (0.3725)</td>
<td>−0.565 (0.3788)</td>
<td>−0.038 (0.6352)</td>
</tr>
<tr>
<td>Employed for salary or wages</td>
<td>−0.306 (0.3412)</td>
<td>−0.731** (0.3631)</td>
<td>−0.006 (0.5401)</td>
</tr>
<tr>
<td>Annual income (reference group: less than INR 2,50,000)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>INR 2,50,001 – 5,00,000</td>
<td>0.482 (0.2956)</td>
<td>0.173 (0.3032)</td>
<td>−0.055 (0.4149)</td>
</tr>
<tr>
<td>INR 5,00,001 – 7,50,000</td>
<td>0.619* (0.3548)</td>
<td>0.618* (0.3624)</td>
<td>0.903* (0.4808)</td>
</tr>
<tr>
<td>INR 7,50,001 – 10,00,000</td>
<td>−0.147 (0.3602)</td>
<td>0.061 (0.3697)</td>
<td>1.203** (0.5193)</td>
</tr>
<tr>
<td>INR 10,00,001 – 15,00,000</td>
<td>0.406 (0.4176)</td>
<td>0.07 (0.4005)</td>
<td>−0.62 (0.6077)</td>
</tr>
<tr>
<td>More than INR 15,00,000</td>
<td>−0.321 (0.4487)</td>
<td>0.201 (0.4878)</td>
<td>−0.244 (0.5681)</td>
</tr>
<tr>
<td>Financial Education</td>
<td>0.54* (0.2847)</td>
<td>0.075 (0.2733)</td>
<td>−0.074 (0.2641)</td>
</tr>
</tbody>
</table>

Note: *, **, and *** indicate the level of significance at 10%, 5%, and 1%, respectively. Standard errors are in parentheses.
Probit regression was employed to find the effects of OFL, SFL, and demographic traits on fintech adoption across three segments. The regression coefficients and standard errors from the Probit models are presented in Table 2. In the case of mobile banking (Column 1), both OFL and SFL display positive associations with the likelihood of usage. But SFL ($\beta = 0.852; p = 0.000$) has a more robust association with mobile banking usage compared to OFL ($\beta = 0.185; p = 0.019$). Within the other segments (Columns 2 and 3), OFL has a negative association with the usage of mobile payments ($\beta = -0.127; p = 0.132$) and digital lending ($\beta = -0.105; p = 0.301$), but the relationship is not statistically significant. Thus, H1 is only partially accepted. On the other hand, SFL exhibits a significant positive association with the likelihood of using mobile payments ($\beta = 0.886; p = 0.001$) and digital lending ($\beta = 1.344; p = 0.000$). Hence, H2 is accepted under all three categories. This confirms that individuals who perceive themselves as financially capable, despite the potential mismatch with their actual financial knowledge, are more likely to use mobile banking and payments and engage in digital lending activities than those who are knowledgeable but not confident in their capabilities. In line with previous findings (Nguyen, 2022), SFL has a stronger association with fintech adoption behavior compared to OFL.

The findings also suggest that the adoption of mobile banking is more prevalent among the older generation and educated people, whereas mobile payments are mostly adopted by the youngest generation and those living in urban and metropolitan areas. Also, compared to the reference group, students are less likely to use mobile banking, and salaried employees are less likely to adopt mobile payments. Financial education has a weak influence on the likelihood of using mobile banking, while income has no notable effect on usage in both cases. In the last category, men and younger respondents exhibit a higher inclination toward using digital lending services. Metropolitan dwellers are also more likely to engage in digital lending activities, but the associated level of significance is weak. Those in the 3rd and 4th income brackets have a higher likelihood of using digital lending than those in the reference group.

4. DISCUSSION

The findings indicate that the perceptions of one’s financial capabilities matter more in adopting fintech services than their actual competence. Previous studies have also consistently highlighted the superior explanatory power of SFL in understanding and predicting financial behaviors (Lind et al., 2020; Parker et al., 2011; Xiao et al., 2014). In the case of fintech, people who are generally more confident in financial matters are more likely to perceive the potential benefits rather than being skeptical or hesitant to embrace these technological innovations. Consequently, they display a higher willingness to adopt fintech services and capitalize on the convenience, efficiency, and accessibility they provide. This corroborates the findings of Shiau et al. (2020), who confirmed a positive connection between financial self-efficacy and users’ perceived usefulness of fintech services.

The findings also reveal interesting patterns in fintech adoption across different demographic groups. Mobile banking is more prevalent among educated people and the older generation. In line with the findings of Niu et al. (2021), educated individuals have a better understanding of fintech and its benefits, leading to higher adoption rates. Notably, the data suggests a surprising trend – older generations, who might have been accustomed to traditional banking methods, are now readily embracing the convenience and accessibility offered by mobile banking. Also, compared to the reference group, students are less inclined to use mobile banking, which could be due to their limited financial needs.

In the case of mobile payments, the youngest generation is the predominant user group. This can be attributed to the tech-savviness of Gen Z and their familiarity with digital platforms (Turner, 2015). Those living in urban and metropolitan areas also display a higher propensity to use mobile payments, potentially due to the improved accessibility of digital infrastructure in these areas (Mahendru et al., 2022). An unexpected outcome was the lower likelihood of salaried employees adopting mobile payments, which warrants further exploration. In both cases, income does not have a very strong effect on usage. This suggests that individuals across different income brackets
have similar opportunities and access to fintech services, highlighting the potential for financial inclusion through technology (Khera et al., 2022).

In the digital lending category, younger cohorts (Generations Y & Z) demonstrate a higher propensity for adoption, aligning with the perception of digital natives being more open to embracing technological innovations (Koroleva, 2022). Additionally, men exhibit a higher likelihood of using digital lending services, consistent with the observations of Chen et al. (2023) regarding gender gaps in fintech adoption. The analysis also reveals that financial education does not have a substantial impact on an individual’s usage of fintech services. However, without knowing the specific curriculum and content of the programs in which respondents participated, it is challenging to draw a definitive conclusion regarding its influence on fintech adoption.

Recognizing these variations, it is imperative for fintech service providers to employ targeted approaches that cater to the unique needs and preferences of different demographic segments. Fintech companies ought to prioritize enhancing the usability of their applications by simplifying processes, ensuring intuitive navigation, and developing user-friendly interfaces. They could further improve the user experience by incorporating digital financial education components within their applications, such as interactive tools, educational resources, and personalized guidance. This approach not only reduces complexity but also builds trust and confidence among users, which in turn could promote wider adoption of these innovative services, as proposed by Roh et al. (2022).

In this increasingly digital world, the utilization of fintech services plays a pivotal role in facilitating a better life. Policymakers should prioritize the implementation of tailored educational programs that focus not only on enhancing individuals’ objective financial knowledge but also on boosting their confidence, improving their self-assessment of financial abilities, and instilling positive attitudes toward fintech solutions. By equipping individuals with the necessary skills and confidence to navigate the digital financial landscape effectively, the OECD (2020) posits that barriers to entry can be minimized, making fintech services more accessible and inclusive. Moreover, efforts should be directed towards improving digital infrastructure in underserved areas to ensure equal opportunities for fintech adoption. Bridging the digital divide should be the top priority on the Government’s agenda. This entails initiatives like expanding internet connectivity to disadvantaged communities, promoting affordable access to devices, and implementing digital literacy programs. By addressing these aspects and fostering an inclusive fintech ecosystem, individuals from all walks of life can fully leverage the benefits offered by fintech services, contributing to their financial well-being and overall economic empowerment.

CONCLUSION

The study delves into the intricate relationship between financial literacy and the adoption of three different fintech segments. The findings demonstrate that individuals’ subjective perception of their financial abilities, as captured by Subjective Financial Literacy, has a notably stronger association with fintech adoption compared to their actual financial knowledge, as measured by Objective Financial Literacy. Moreover, the study reveals that demographic characteristics of individuals contribute to variations in fintech adoption across different segments. These insights hold significant implications for both fintech service providers and policymakers, shaping their strategies to enhance fintech adoption and accelerate financial inclusivity. However, there are limitations to consider. There is a possibility of biased estimation due to reverse causality, where individuals who have already adopted fintech applications may subsequently improve their financial knowledge and confidence. Hence, the present findings should be interpreted with caution. Another limitation stems from the restricted coverage of financial literacy. Reliance on the Big 5 questions offers only a limited assessment, highlighting the need for a more comprehensive approach in future research. In particular, including indicators that are relevant to digital finance would greatly enhance contributions to the field.
AUTHOR CONTRIBUTIONS

Conceptualization: Mynavathi L.
Data curation: Shamli Prabhakaran.
Formal analysis: Shamli Prabhakaran.
Investigation: Shamli Prabhakaran.
Methodology: Mynavathi L.
Project administration: Mynavathi L.
Visualization: Shamli Prabhakaran.
Writing – original draft: Shamli Prabhakaran.
Writing – review & editing: Mynavathi L.

REFERENCES


APPENDIX A

Questionnaire

Part 1: Demographic information

1. Gender
   - Male
   - Female
   - Other

2. Age __________________

3. Which of the following best describes the community you live in?
   - Rural
   - Semi-urban
   - Urban
   - Metropolitan

4. Highest educational qualification
   - Highschool
   - Undergraduate
   - Postgraduate or higher
   - Other professional courses

5. Occupation
   - Unemployed or retired
   - Student
   - Self-employed
   - Employed for salary or wages

6. Annual Income
   - Less than INR 2,50,000
   - INR 2,50,001 – 5,00,000
   - INR 5,00,001 – 7,50,000
   - INR 7,50,000 – 10,00,000
   - INR 10,00,001 – 15,00,000
   - More than INR 15,00,000

7. Have you ever participated in a financial education course or training offered by your school, college or workplace?
   - Yes
   - No
Part 2: Fintech adoption

Please indicate whether you use the following types of applications:

8. Mobile banking applications (like YONO SBI, iMobile pay by ICICI, etc.)
   - Yes, I use it
   - No, I do not use it

9. Mobile payment applications or Mobile wallets (like Paytm, Googlepay, etc.)
   - Yes, I use it
   - No, I do not use it

10. Digital lending applications (peer-to-peer lending or online load providers like LendingKart, Lazypay, etc.)
    - Yes, I use it
    - No, I do not use it

Part 3: Financial Literacy

The following questions are designed to assess your level of financial literacy and your experience with financial matters. Please answer each question to the best of your knowledge.

11. Suppose you have Rs.100 in a savings account, and the interest rate is 2 percent per year. After 5 years, how much do you think you would have in the account if you left the money to grow?
    - More than ₹110
    - Exactly ₹110
    - Less than ₹110
    - Do not know.

12. Imagine that the interest rate on your savings account earns 1 percent per year, and inflation is 2 percent per year. After one year, would you be able to buy______
    - More than today with the money in the account
    - Exactly the same as today with the money in the account
    - Less than today with the money in the account
    - Do not know

13. A 15-year mortgage typically requires higher monthly payments than a 30-year mortgage, but the total interest paid over the life of the loan will be less. True or False?
    - True
    - False
    - Do not know
14. If interest rates rise, what will happen to bond prices?

☐ They will rise  
☐ They will fall  
☐ They will remain the same  
☐ There is no relationship between bond prices and interest rates

15. Buying a single company stock usually provides a safer return than a stock mutual fund. True or False?

☐ True  
☐ False  
☐ Do not know

16. Please select the response that best represents your agreement with each statement.

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Statements</th>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Neutral</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Compared to most others, I know more about managing personal finances</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>Others often ask me for financial advice</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>3.</td>
<td>I feel very confident in my knowledge of financial matters</td>
<td></td>
<td></td>
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</table>