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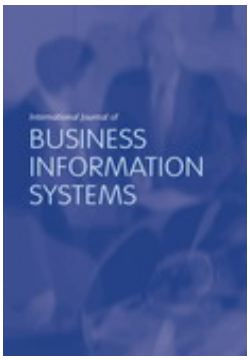


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# Exploring digital financial literacy through the lens of planned behaviour theory and technology acceptance model

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# Exploring digital financial literacy through the lens of planned behaviour theory and technology acceptance model

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**Abstract:** This study formulates a synthesised theory of digital financial literacy consisting of the technology acceptance model (TAM) and the theory of planned behaviour (TPB) to demonstrate how psychological and technological antecedents influence digital financial literacy. Based on a systematic literature review of 37 Scopus-listed studies that go through PRISMA protocol, it establishes major connections between model constructs and their impacts on financial behaviour. The hypotheses in the analysis include that perceived usefulness and ease of use increase the adoption of digital finance, perceived behavioural control bridges the digital competence and financial decision-making, and that behavioural intention mediates the effect of technology use on financial and entrepreneurial outcomes. The combination of behavioural and technological approaches to digital capability as shown in the framework display the mutual relationship between motivation and digital capability. The results give information to create interventions that boost digital skills and behavioural preparedness, to create inclusive and sustainable digital financial literacy.

**Keywords:** digital financial literacy; DFL; technology acceptance model; TAM; theory of planned behaviour; TPB; financial behaviour; systematic literature review.

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## 1 Introduction

The COVID-19 pandemic has accelerated the pace of financial technology adoption, which has disrupted the experience of accessing and engaging with financial services and created more necessity to address the challenge of inclusive digital financial literacy (DFL) (Ferilli et al., 2024; Das and Dutta, 2024). Although digital tools may be more accessible and convenient, they are also associated with new dangers that may become apparent in people who do not have the digital expertise or confidence to cope with complicated platforms. DFL has become a multidimensional concept, which incorporates technical, behavioural, and emotional skills to support safe and fair financial participation (Chhillar et al., 2024; Kass-Hanna et al., 2022). The adoption behaviour of users has been explained using two different models: the technology acceptance model (TAM) that emphasises on perceived usefulness and ease of use, and the theory of planned behaviour (TPB) that highlights behavioural intention, attitudes, and perceived control (Venkatesh and Davis, 2000; Ajzen and Fishbein, 1975). Nevertheless, most studies use these models alone or incorporate other variables like trust and risk perception without entirely incorporating their theoretical cores (Rahayu et al., 2023; Shehadeh et al., 2024).

This paper aims at the development of a hybrid model of TAM and TPB to determine the primary factors that contribute to the introduction and use of digital financial technologies (Basar et al., 2022; Zaimovic et al., 2024). Based on the systematic review of 35 articles that are indexed in Scopus and analysed using thematic synthesis, the study concludes the intersection of such constructs as perceived usefulness, digital competence,

and perceived behavioural control (PBC) to influence the behavioural intention, financial behaviour, and other more global outcomes, such as inclusion or entrepreneurial motivation. The developed theoretical propositions provide useful information on sustainable digital financial interactions between various demographic groups (Kamble et al., 2024; Nazneen, 2024). This model can be used to create more specific intervention strategies to improve digital financial capabilities and decision-making by bringing together behavioural and technological approaches. Finally, the study will help to further the DFL theory and practice, providing a solid base on which future studies and policy development may rely (Phung, 2024).

## 2 Theoretical background

### *2.1 Digital financial literacy*

DFL has become one of the primary facilitators of inclusive financial inclusion that has transformed beyond rudimentary financial literacy and digital literacy to include multidimensional competencies of fraud awareness, risk management, and behavioural flexibility (Chhillar et al., 2024; Lyons and Kass-Hanna, 2021; Choung et al., 2023). Recent frameworks emphasise the role of DFL in enabling users to make safe use of the fintech in especially the context of financial vulnerability or marginalisation (Zaimovic et al., 2024; Achanta and Lepcha, 2025). Empirical research is associated with the stronger financial habits, resiliency, and technology adoption among different groups of people, such as Indonesian millennials and poor communities worldwide (Setiawan et al., 2022; Kass-Hanna et al., 2022; Grover et al., 2025). In developed economies, DFL also has a positive correlation with well-being, the use of peer-to-peer lending, and planning of digital assets (Choung et al., 2025; Khan et al., 2025; Steen et al., 2024). In addition, digital competencies and self-protection are usually more helpful in forecasting financial behaviour than traditional financial knowledge (Li and Fisher, 2022; Choung et al., 2023). These findings affirm the incorporation of TAM and TPB in the study on the basis that the perceived ease of digital use and behavioural control form an important mediator in the process of forming DFL-based financial decisions.

### *2.2 Technology acceptance model*

TAM, which was developed by Davis (1989) describes the adoption of technology in terms of two constructs; perceived usefulness and perceived ease of use. Its predictive soundness has been enhanced with extensions such as TAM2 and UTAUT which include the social and cognitive variables such as subjective norms, job relevance and quality of output (Napitupulu et al., 2017; Venkatesh and Davis, 2000; Venkatesh, 2000). Still more recent research has modified TAM, adding variables such as trust, privacy, and risk, to capture changing digital environments, such as mobile commerce, healthcare, and smart cities (Awasthi and Sangle, 2013; Dhagarra et al., 2020). Psychological and contextual factors, including self-efficacy, anxiety, and culture, have also been highlighted by the scholars as the strengths of the model as well as its weaknesses (Legris et al., 2003; Salovaara and Tamminen, 2009; Lim, 2018; Tetik et al., 2024). In spite of this criticism, TAM has strong bases in explaining digital financial engagement in particular when it is accompanied by behavioural frameworks in complicated settings.

### 2.3 Theory of planned behaviour

Ajzen (1991) proposed the TPB, which explains the influences of attitude, subjective norms, and PBC on the intention and actions of individuals as a solid behavioural construct to comprehend the digital financial participation. The TPB, when applied to DFL, focuses on volitional control and motivational preparedness, which are essential to using complicated financial technologies. Empirical research and meta-analytic studies support the predictive validity of TPB, and its various constructs, such as self-efficacy, are thought to increase PBC because they provide users with the sense of confidence in the use of digital tools (Armitage and Conner, 2001; Bandura, 1977; Steinmetz et al., 2016). The model has been extended to a broader range of contexts by social support and dynamically changing systems of belief, which have been found to be relevant in digital contexts where control and feedback are constantly updating (Ajzen, 2002; Sussman and Gifford, 2019). TPB in combination with TAM is complemented by behavioural aspects that allow achieving a more holistic model of digital financial engagement.

## 3 Methodology

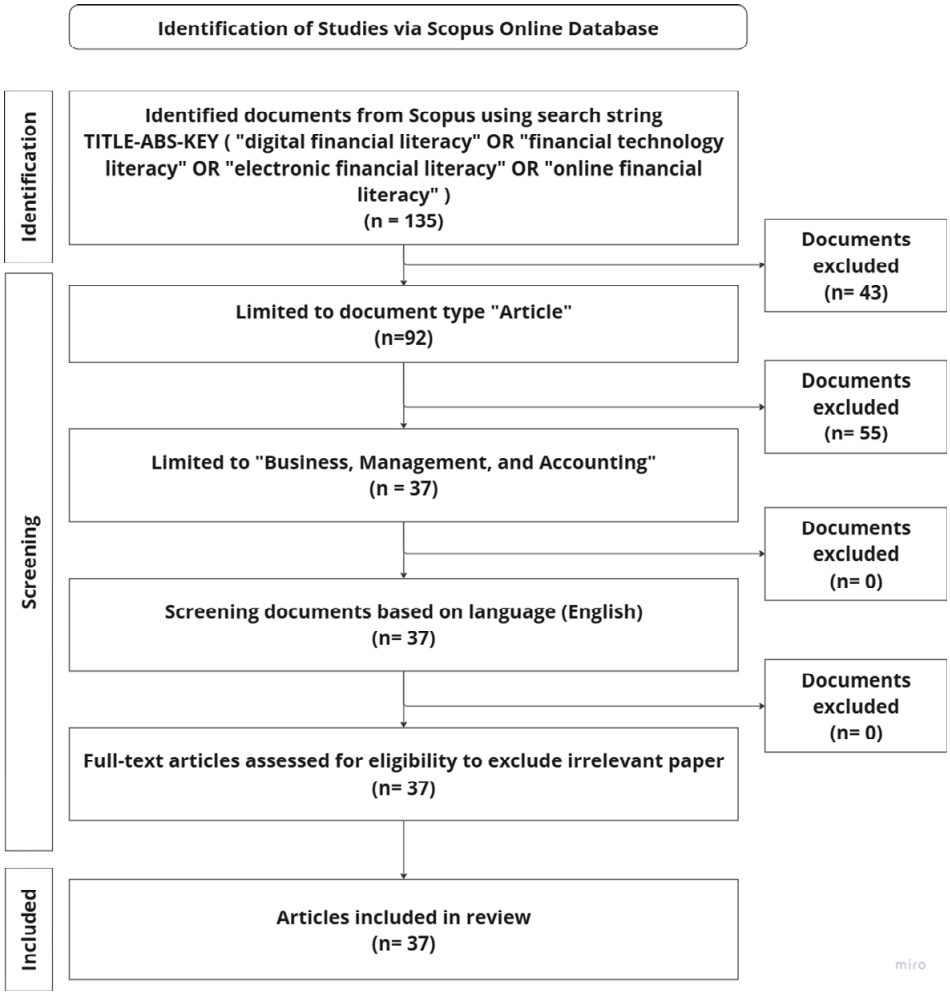
### 3.1 Research design

The proposed study will use a systematised literature review (SLR) to synthesise the evidence regarding DFL, which is guided by a PRISMA protocol to provide transparency and rigor to the research. The review involved predetermined inclusion and exclusion criteria and involved thematic analysis to identify major patterns and themes within the integrity of the identified studies. The selection of Scopus as the only database was based on the fact that it has indexed business related disciplines in a comprehensive manner and has high filtering capabilities which were effective in assisting the focused and methodical search strategy. Other databases were not incorporated in the study because of the access criteria, but an attempt was made to make the Scopus dataset as comprehensive as possible and avoid bias. This will enhance the credibility and reproducibility of findings of the study.

### 3.2 Data collection and analysis

The data regarding this research was gathered with the help of a primary search in the Scopus database using the keywords such as DFL and similar terms entered into the TITLE-ABS-KEY search field and returning 135 articles. Following filtering of peer-reviewed articles, relevance of the subject to Business and Management and English language, the dataset was reduced to 37 articles all of which passed the thematic relevance, empirical methodology as well as methodological transparency criteria. A thematic synthesis was used to analyse these articles, in accordance with PRISMA protocol. Data analysis was performed using qualitative thematic coding to determine the main patterns in objectives and methods as well as findings with references to such dimensions as DFL scope, behavioural outcomes, and pedagogical approaches. Comparative analysis has additionally been used to seek consistency and variation among studies, which provides a systematic and logical synthesis of knowledge on DFL.

**Figure 1** PRISMA systematic literature review flow diagram for DFL




## 4 Result

### *4.1 Synthesising DFL constructs through theoretical lenses*

A systematic review of 37 Scopus-indexed publications showed that there are different variables that have been represented as DFL. These variables were put into three big clusters:

1 foundational and behavioural capabilities

2 technology adoption and innovation patterns

3 inclusion and protection outcomes.

This framework is associated with the complexity of DFL and corresponds to major constructions of the TAM and the TPB.

### 4.2 Foundational and behavioural capabilities (TPB-aligned constructs)

This cluster puts into focus the underlying and behavioural capabilities that are congruent to the TPB with the key construct of DFL being a central TPB influence in determining financial behaviour in the digital age. DFL is present in at least 19 articles, where it most frequently acts as an enabler of digital engagement, and also mediates between variables such as trust, regulation, or fintech adoption and behavioural outcomes such as inclusion, investment, and financial well-being. Certain constructs are supported by such constructs as digital competency (11 studies) and financial knowledge (10 studies), which support the technical preparedness of users in such platforms as e-wallets and peer-to-peer lending. The behaviour patterns, especially saving, budgeting, and spending are covered in 12 studies and are always associated with intentions, perceived control, and DFL levels. Risk perception, which is mentioned in 8 studies, moderates as well with a particular focus on cases of digital assets or gender-related adoption barriers. These results highlight the two-fold role of DFL both as a technical skill set and a behavioural determinant that must be incorporated to be responsible in digital financial ecosystems.

**Table 1** Core digital financial knowledge and skills

| *Variable category* | *Count* | *Representative sources* |
|---|---|---|
| Digital financial literacy | 19 | Khan et al. (2025), Kass-Hanna et al. (2022), Rahayu and Juita (2023), Zaimovic et al. (2025), Mishra et al. (2024) |
| Digital competency/capability | 11 | Steen et al. (2024), Peter et al. (2024), Adnan et al. (2023), Widyastuti et al. (2024), Shehadeh et al. (2024) |
| Financial knowledge/skills | 10 | Kim et al. (2025), Abdallah et al. (2025), Gupta et al. (2025), Bhat et al. (2025), Zaimovic et al. (2025) |
| Financial behaviour/patterns | 12 | Setiawan et al. (2022), Mishra et al. (2024), Shah et al. (2024), Amnas et al. (2024) |
| Investment/saving decisions | 10 | Rahayu et al. (2024), Kim et al. (2025), Khan et al. (2025), Tan et al. (2025), Bhat et al. (2025) |

### 4.3 Technology interaction and adoption patterns (TAM-aligned constructs)

Such cluster marks how DFL allows technology adoption, which is consistent with the TAM based on such constructs as perceived ease of use and perceived usefulness. DFL is demonstrated to assist users to use tools, including e-wallets, mobile banking, and peer-to-peer lending, by promoting the adoption of FinTech (11 studies), digital payment literacy (8 studies), and platform usage (7 studies). Less literature is devoted to cryptocurrency use and AI-driven financial applications, which have associated DFL with risk control and customised advisory participation. All in all, the findings highlight the contribution of DFL in enhancing the technological fluency, behavioural intention and trust of users in the changing digital finance contexts. Table 2 gives an overview of the classification.

**Table 2** Technology adoption and usage

| *Variable category* | *Count* | *Representative sources* |
|---|---|---|
| FinTech adoption/usage | 11 | Wijaya et al. (2025), Amnas et al. (2024), Mishra et al. (2024), Khan et al. (2025), Rahayu and Juita (2023) |
| Digital payment literacy | 8 | Shehadeh et al. (2024), Shah et al. (2024), Nandru et al. (2024), Rashid et al. (2025), Bukvić and Babić (2023) |
| Mobile/platform usage | 7 | Li and Meyer-Cirkel (2021), Chaisiripaibool et al. (2025), Adnan et al. (2023), Bhat et al. (2025) |
| AI/digital financial innovation | 4 | Peter et al. (2024), Gupta et al. (2025), Steen et al. (2024), Martínez de Ibarreta et al. (2025) |
| Cryptocurrency/digital assets | 5 | Steen et al. (2024), Chaisiripaibool et al. (2025), Rašticová et al. (2025), Kass-Hanna et al. (2022) |

### *4.4 Equity, well-being, and risk considerations (cross-theory outcomes)*

This thematic group focuses on the relationship between DFL and social equity, personal well-being, and minimising financial risk with references to various frameworks like TPB, social role theory, and inclusive finance. One of the major areas of concentration is financial inclusion with 13 studies depicting how DFL empowers the poorly served segments of the population such as rural populations, women and informal employees. The unequal access to digital financial tools is also discussed in relation to demographic and gender-related discrepancies in 10 and 9 studies respectively. Also, eight studies associate DFL with enhanced financial well-being, such as positive money management and financial shock resilience. In a number of studies, consumer protection and digital security become vital issues, in particular, in the area of fraud and data privacy. The combination of these results highlights the larger systemic nature of DFL not as a set of skills, but as a facilitator of ethical, safe, and inclusive engagement in digital finance.

**Table 3** Financial behaviour and decision-making

| *Variable category* | *Count* | *Representative sources* |
|---|---|---|
| Financial inclusion | 13 | Zaimovic et al. (2025), Amnas et al. (2024), Widyastuti et al. (2024), Su et al. (2021), Rašticová et al. (2025) |
| Demographic factors | 10 | Steen et al. (2024), Martínez de Ibarreta et al. (2025), Rahayu et al. (2024), Mishra et al. (2024), Bukvić and Babić (2023) |
| Gender-specific factors | 9 | Rahayu and Juita (2023), Mishra et al. (2024), Widyastuti et al. (2024), Bhat et al. (2025), Shehadeh et al. (2024) |
| Financial well-being | 8 | Gupta et al. (2025), Bhat et al. (2025), Tan et al. (2025), Adnan et al. (2023), Abdallah et al. (2025) |
| Consumer protection | 4 | Shah et al. (2024), Steen et al. (2024), Rašticová et al. (2025), Khan et al. (2025) |
| Digital security | 3 | Bukvić and Babić (2023), Shehadeh et al. (2024), Chaisiripaibool et al. (2025) |

### 4.5 Sectoral perspective in DFL research

To put the application of DFL into perspective in real-life situations, the literature reviewed was also broken down on sectoral grounds. Such a mapping helps see the intersection DFL makes with institutional structures, technology infrastructure, and context-specific to the population. It also provides the way DFL research incorporates the dimensions of behaviour (as consistent with TPB) and of technology (as consistent with TAM).

**Table 4** Sectoral distribution of DFL research

| *Sector category* | *Specific sectors* | *Count* | *Key focus area* | *Representative sources* |
|---|---|---|---|---|
| Financial technology and infrastructure | Banking | 3 | Digital service adoption, branch accessibility | Martínez de Ibarreta et al. (2025), Ferilli et al. (2024) |
| | FinTech | 5 | Innovation adoption, trust, inclusion | Amnas et al. (2024), Wijaya et al. (2025), Khan et al. (2025) |
| | Payment systems | 4 | Mobile payments, e-wallets, usability | Shehadeh et al. (2024), Shah et al. (2024), Rashid et al. (2025) |
| | Digital assets/crypto | 3 | Risk management, adoption barriers | Steen et al. (2024), Chaisiripaibool et al. (2025) |
| Demographic and social equity | Women's economic empowerment | 6 | Financial decision-making, entrepreneurship | Rahayu and Juita (2023), Mishra et al. (2024), Bhat et al. (2025) |
| | Youth/education | 3 | Financial education, peer influence | Adnan et al. (2023), Abdallah et al. (2025) |
| | Rural finance | 3 | Infrastructure barriers, behavioural shifts | Su et al. (2021), Setiawan et al. (2022) |
| | Gender and elderly | 5 | Access disparities, adaptive strategies | Widyastuti et al. (2024), Kim et al. (2025), Steen et al. (2024) |
| Business and entrepreneurial applications | MSME/micro-enterprise | 4 | Platform usage, business decisions | Mishra et al. (2024), Nandru et al. (2024) |
| | Personal/household finance | 10 | Budgeting, saving, financial resilience | Kim et al. (2025), Tan et al. (2025), Bhat et al. (2025) |
| | Consumer finance | 3 | Spending behaviour, financial planning | Shah et al. (2024), Gupta et al. (2025) |
| Research and policy development | Methodology/ measurement | 2 | Framework development, indicators | Zaimovic et al. (2025), Abdallah et al. (2025) |
| | Cross-national analysis | 2 | Comparative studies, policy design | Al-Majali et al. (2024), Kass-Hanna et al. (2022) |

Sectoral analysis shows that DFL research covers four major domains that, on the whole, illustrate the application of TAM and TPB concepts in various implementation situations. Financial technology and infrastructure researches (15 total) address how DFL can address the gap between technological potential and institutional services by digitalising banking (Martínez de Ibarreta et al., 2025; Ferilli et al., 2024), coverage of misunderstood populations by FinTech (Amnas et al., 2024; Wijaya et al., 2025), and the usability of payment systems with the focus on TAM constructs such as perceived ease of use (Shehadeh et al., 2024). The demographic and social equity research (17 studies) is devoted to the population-specific application, with women economic empowerment such as DFL-backed entrepreneurial decisions being discussed in terms of female access to TPB variables (Rahayu and Juita, 2023; Mishra et al., 2024; Bhat et al., 2025), whereas youth education, rural infrastructures, and access among the elderly studies demonstrate how TPB constructs, such as the PBC and social norms, mediate between digital financial participation (business/entrepreneurial (17 studies) are examples that have practicalised DFL into personal financial research associating DFL with budgeting and monetary resilience (Kim et al., 2025; Tan et al., 2025), platforms of MSMEs by participants of the informal sector (Mishra et al., 2024; Nandru et al., 2024), and research related to consumer finance by applying it to several large expenditure categories (Shah et al., 2024; Gupta et al. 2025). Research and policy development (4 studies) provides the methodological enhancement with the standards of the framework and the cross-country comparative analysis (Zaimovic et al., 2025; Al-Majali et al., 2024). This sectoral distribution of distribution is indicative in the fact that DFL is a multidisciplinary construct that successfully incorporates the technology-focused constructs of TAM with the behavioural dimensions of TPB to aid both theoretical development and policy development in relation to institutional, social, and economic environments.

### *4.6 Theoretical mapping: application of TAM and TPB constructs in DFL studies*

Although TAM and TPB have been applied extensively individually in the study of technologies and behaviour, their combination in the framework of DFL has been underutilised. This discussion shows that DFL literature can address this theoretical gap because it shows empirical correlations between technology acceptance and behavioural constructs in various financial decision-making situations.

The analysis of the TAM constructs in DFL research demonstrates the opportunities and restrictions in theory application nowadays. Although the main TAM variables, such as perceived usefulness and ease of use, seem to be consistent across the literature, they interact with behavioural outcomes in a wider scope than the conventional models of technology adoption (Ferilli et al., 2024; Shehadeh et al., 2024). The concept of digital competence proves to be an especially important construct that facilitates the connection between technical skills and psychological preparedness particularly in the case of vulnerable groups like older users working with multifaceted financial systems (Kim et al., 2025). The fact that explicit TAM applications are relatively uncommon implies that research in DFL has not used this framework to the maximum extent in explaining technology-mediated financial behaviours. Nonetheless, new research proves the innovative strategies by connecting perceived usefulness directly to the intention to become an entrepreneur and financial well-being, thus suggesting the transition to more multifaceted models of integration (Wijaya et al., 2025; Shah et al., 2024). This tendency

demonstrates that further systematic integration of TAM constructs can be done to improve the existing knowledge on the topic of digital financial tool adoption and continued use.

**Table 5** Integrated TAM-TPB construct applications in DFL

| *Framework* | *Core constructs* | *Count* | *Integration focus* | *Key studies* |
|---|---|---|---|---|
| TAM core | Perceived usefulness | 2 | Links to behavioural/entrepreneurial intention | Ferilli et al. (2024),; Shehadeh et al. (2024) |
| | Ease of use/usability | 3 | Bridges to behavioural control and attitudes | Shah et al. (2024), Watts et al. (2024) |
| | Digital competence | 2 | Mediates technology-behaviour relationship | Kim et al. (2025), Shehadeh et al. (2024) |
| TPB core | Behavioural intention | 4 | Central mediator for TAM-outcome relationships | Wijaya et al. (2025), Nandru et al. (2024) |
| | Financial behaviour | 5 | Primary outcome variable for integrated models | Bhat et al. (2025), Shah et al. (2024) |
| | Behavioural control | 2 | Moderates technology acceptance effects | Rahayu et al. (2024), Mishra et al. (2024) |
| Hybrid constructs | Usage behaviour + technology acceptance | 2 | Novel integration approach | Wijaya et al. (2025), Nandru et al. (2024) |
| | Digital readiness + behavioural intention | 2 | Combines capability and motivation | Rahayu et al. (2024), Shehadeh et al. (2024) |

The interaction between the technology acceptance and behavioural constructs in influencing digital financial results is shown by the cross-framework integration of technology acceptance and behavioural constructs, which show three major patterns of converging theory. The perceived usefulness is always an immediate indicator of behavioural intention and financial behaviour, which implies that the evaluation of technology usefulness results in more immediate actionable financial behaviour and not just adoption intentions (Shehadeh et al., 2024; Wijaya et al., 2025). Digital competence has the highest potential of integration, as it concomitantly satisfies the capability assumptions of TAM and the PBC of TPB, especially when vulnerable populations and sophisticated financial technologies are investigated (Rahayu et al., 2024; Kim et al., 2025). It is also identified in the matrix that behavioural intention is a mediating factor, which links technology perceptions to various outcomes, such as entrepreneurial behaviour, investment decisions, and financial well-being in the context of different demographics (Nandru et al., 2024; Bhat et al., 2025). Such patterns of integration imply that the traditional one-framework methodology might not be able to appreciate the intricate interaction between technological and psychological determinants in online financial interactions. The development of such hybrid constructs as digital readiness + behavioural intention also points to the fact that DFL research is shifting in a direction of more complex theoretical frameworks that can measure the multidimensionality of DFL (Rahayu et al., 2024; Shehadeh et al., 2024).

**Table 6** Cross-framework integration matrix

| *TAM constructs/TPB constructs* | *Behavioural intention* | *Attitudes* | *Behavioural control* | *Risk attitudes* | *Financial behaviour* | *Well-being behaviour* | *Entrepreneurial intention* |
|---|---|---|---|---|---|---|---|
| Perceived usefulness | ✓ | ✓ | ○ | - | ✓ | ○ | ✓ |
| Ease of use | ✓ | ✓ | ✓ | ○ | ○ | ○ | ○ |
| Technology adoption | ✓ | ○ | ✓ | ○ | ✓ | ○ | ✓ |
| Digital competence | ○ | ○ | ✓ | ✓ | ✓ | ✓ | ○ |
| Mobile acceptance | ✓ | ○ | ○ | - | ✓ | ○ | ○ |
| Platform adoption | ✓ | ○ | ○ | - | ○ | - | ○ |
| AI acceptance | ○ | - | ○ | ✓ | ○ | - | ✓ |

Notes: ✓ = Direct relationship found ○ = Indirect/partial relationship '-' = No significant relationship studied.

The implications of the theoretical integration results on the further development of DFL research are important because they may shift the research activities on the basis of fragmented frameworks to whole-behavioural-technological models. The regular patterns between the perceived usefulness and financial results indicate that the design of technologies and user experience directly impact the quality of financial decisions, disproving the assumption that adoption is a sufficient condition of delivering positive results (Ferilli et al., 2024; Shah et al., 2024). The mediating role of digital competence points to the fact that both technical and psychological confidence should be addressed by the intervention in cases of populations having digital exclusion or financial vulnerability (Mishra et al., 2024; Watts et al., 2024). Future studies ought to leverage on such patterns of integration by coming up with integrated measurement tools that are able to measure both the perceptions and behavioural determinants of technology in individual studies. The increase in the explanatory ability of the integrated models over the single frameworks applications offers a solid ground to develop more efficient DFL programs that are able to deal with the effects on the user experience and behavioural change at the same time. The theoretical development puts DFL research in a better position to play a bigger role in designing policies and intervention in an increasingly digitised financial world.

## 5 Discussion

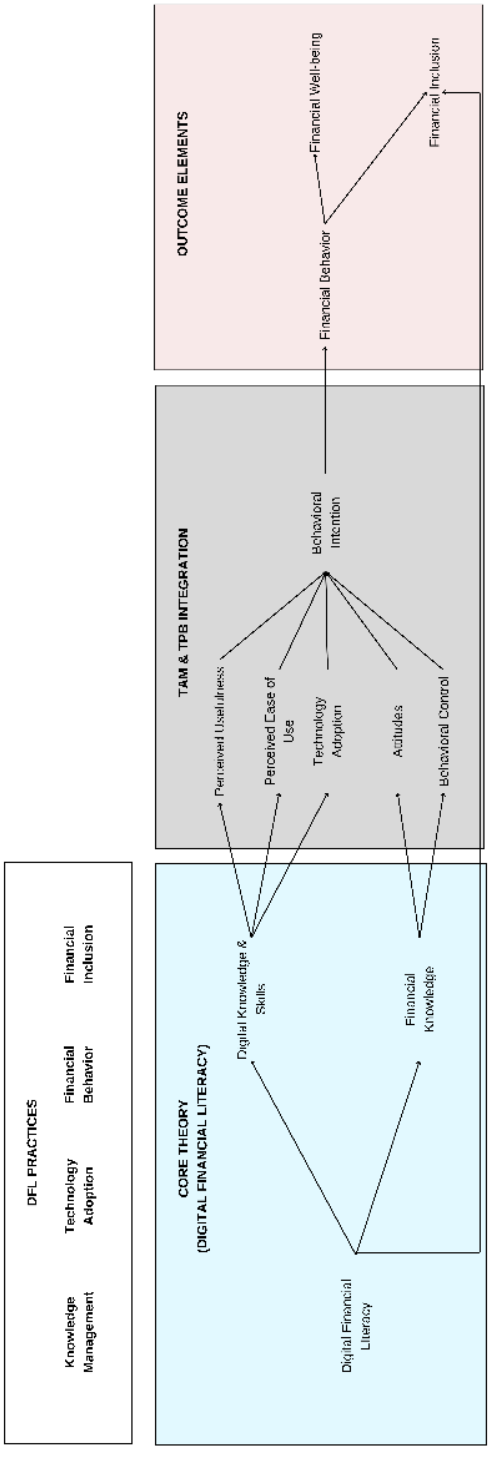
The combination of the TAM and the TPB in the study provides an all-inclusive prism of insight into the DFL adoption. The findings are summarised in Figure 2 that shows three key propositions between technology acceptance and behavioural control on the one hand, and financial outcomes and adoption behaviour on the other hand. Such propositions indicate user-level determinants and outcome variables, which depict the manner in which digital interaction capabilities transform into inclusive and productive financial practices.

Figure 2, the DFL Practices box, is an indication of the underlying processes of input, namely, digital competence, risk literacy, fintech familiarity, and platform interaction experience. These are not enabling capabilities but repetitive behaviour that enhances the sense of convenience and control of behaviour. DFL practices are so conceived as the interactive point of digital exposure and behaviour intention.

It should also be made clear that although the intention of being an entrepreneur was also originally added it is not reflected in the final figure because it has been represented so sporadically throughout the 37 studies. In its place, more spread consequences, financial well-being and financial inclusion are underlined. Financial well-being is associated with the capability to fulfll financial commitments and plan in advance and financial inclusiveness is associated with obtaining and utilising formal financial services. Entrepreneurial intention is a contingent construct that is used in researches like Peter et al. (2024) and Mishra et al. (2024).

Proposition 1 Technology acceptance – behavioural intention path.

**Figure 2** Integrative model of DFL (see online version for colours)



This proposition highlights the foundational role of TAM constructs, especially perceived usefulness and ease of use, in shaping behavioural intention to adopt digital financial services. These variables were repeatedly statistically significant predictors of adoption in the studies about fintech usage (Wijaya et al., 2025), cashless payment system (Shehadeh et al., 2024), m-commerce adoption (Biswas and Mishra, 2019), and the adoption of e-wallets (Rashid et al., 2025). Indicatively, Wijaya et al. (2025) established that the perceived usefulness was a significant factor in determining the adoption and subsequent use of fintech. Equally, Rashid et al. (2025) established that ease of use and usefulness had a positive influence on the attitudes and intention to use digital wallets by rural users. The integration matrix confirms the first order relationships (✓) between these constructs and intention, that is, the pathway between perceived technological benefits and behavioural intention is proven to be consistently valid in DFL contexts. In this regard, this suggestion constitutes the pivotal access point to the context of inclusive digital financial behaviour.

Proposition 2 Behavioural controls – financial behaviour path.

The second hypothesis describes the impact of digital competence (noted as a proxy of behavioural capability) on financial behaviour, especially in the case when users are also inclined to think that they have a high degree of behavioural control. Based on the TPB, the research works by Mishra et al. (2024) and Rahayu et al. (2024) demonstrated that PBC directly forecasted financial decision-making and saving behaviour. Moreover, Bhat et al. (2025) proved that digital capabilities enhance self-control and impulsivity is less significant both of which are crucial to sustainable financial behaviour. The results can confirm that digital competence is insufficient, and users should also feel confident about their skills to manage finances in digital settings. This is supported by the integration matrix with direct empirical relationships (✓) between digital competence and behavioural control, behavioural control and financial behaviour. This psychological association shows the significance in integrating skill training with confidence boosting strategies to generate valuable monetary response.

Proposition 3 Technology adoption – financial outcomes path.

The utilisation of digital technology in finance is closely linked to better financial performance in the form of behaviour saving, entrepreneurial intention and financial well-being. In literature, DFL is seen to moderate the relationship between financial knowledge and financial performance particularly in the case of elderly users (Kim et al., 2025) and women entrepreneurs (Peter et al., 2024). Behavioural intention often serves as an intermediary between the utilisation of technologies and actual financial choices, with the help of such constructs as perceived usefulness and ease of use (Wijaya et al., 2025; Rashid et al., 2025). The concept of digital competence is directly related to PBC which justifies the TPB focus on self-efficacy (Bhat et al., 2025; Mishra et al., 2024). Technology engagement can also be influenced by risk perception, specifically with digital assets and fintech-related adoption being the most adopted (Chaisiripaibool et al., 2025; Steen et al., 2024), whereas financial satisfaction and psychological resilience will prove to be the key indicators of digital inclusion (Tan et al., 2025; Gupta et al., 2025).

The combined TAM-TPB model validates that such constructs as perceived usefulness, digital competence, and behavioural intention are always predictive of digital finance in different demographic groups. There is evidence that DFL enables

marginalised users, including rural areas and women-owned businesses, to use fintech products and have safe access to financial services (Nandru et al., 2024; Amnas et al., 2024). Age, gender, and education are important demographic factors that may be incorporated into policy development because they influence the digital readiness (Rahayu et al., 2023; Widyastuti et al., 2024). DFL is contextually connected with entrepreneurial intention, especially in informal sectors of those who are women (Peter et al., 2024). The above results highlight the fact that DFL is a multi-dimensional construct consisting of knowledge, motivation, awareness of risk, and inclusion, which requires holistic interventions to align technology design with behavioural and policy support.

**Table 7** Stakeholder-oriented implications for enhancing DFL

| *Stakeholder* | *Implication* | *Recommended strategies* |
|---|---|---|
| Policymakers | Expand inclusive national digital literacy programs | Design programs focusing on behavioural control and risk awareness (Kass-Hanna et al., 2022; Steen et al., 2024). Address gender, age, and rural access gaps (Widyastuti et al., 2024; Rahayu et al., 2023). |
| Educators | Embed DFL into financial and digital education | Incorporate simulations, scenario-based modules, and adaptive learning to enhance decision-making skills (Gupta et al., 2025; Bhat et al., 2025). |
| FinTech designers | Create user-centred interfaces that build perceived ease and trust | Embed onboarding guides, in-app nudges, and adaptive features tailored to users' digital maturity (Shehadeh et al., 2024; Rashid et al., 2025; Nandru et al., 2024). |

## 6 Limitations and future research

In this study, there are some limitations that are recognised that might affect the interpretation and generalisation of results. The use of Scopus as the main database, which is quite reasonable due to the extensive coverage of business-related research topics, might have resulted in the omission of potentially relevant studies in other databases like Web of Science or local repositories that include non-English research. The 37 studies reviewed are also heterogeneous and thus could not be directly compared given that they differ significantly in geographic focus by encompassing the areas of Southeast Asia, South Asia, Sub-Saharan Africa, and Europe, each of which constitutes a unique regulatory environment and attitudes towards financial technology. Methodological heterogeneity of the research, such as cross-sectional research surveys and longitudinal studies, brings about variability in the operationalisation of constructs, with DFL defined in a variety of ways, such as exclusive use of the platform usability definition, or more comprehensive theories that include the aspect of fraud awareness and behavioural flexibility. In theoretical perspective, the combination of TAM and TPB showed disproportional presence of key constructs where explicit applications of perceived usefulness and ease of use were observed in a small number of studies even though they are the theoretically central ones. Moreover, some of the constructs like entrepreneurial intention and digital asset adoption were not empirically explored as much as was possible preventing propositions to be strong in the integrated model.

In order to overcome these shortcomings, there are various research possibilities that can be suggested in the future. The empirical validation of the integrative model of TAM-TPB using primary data collection and specific cultural contexts is one of the most important priorities, and comparative research on emerging economies (Indonesia, India) and developed ones (Singapore and South Korea) is a light shed on the moderating effects of institutional maturity and regulatory frameworks on construct relationships. The longitudinal research designs would help to study the dynamics of DFL, and how the technology acceptance will change with the prolonged use of the platform, and the mixed-method designs combining both qualitative methods and quantitative surveys would help to understand the contextual opportunities of digital financial decision-making among the marginalised groups. A number of new constructs would also be subject to systematic research, such as digital trust, which is the belief in the safety of platforms and the privacy of user data, AI-enhanced financial decision-making in robo-advisory services and algorithmic advice, and gamification aspects that are being more actively implemented in financial apps to increase their engagement. The research contribution of the future needs to explore demographic variables such as age, gender, income, and geographic location as possible moderators of DFL engagement systematically by analysing multiple groups of participants, which would make it possible to design a more targeted intervention by paying special attention to vulnerable groups such as elderly users, low-income communities, and rural residents whose specific barriers are not fully understood.

## 7 Practical implication for Asian business

The combination of TAM and TPB models in a study of DFL is of great strategic benefit to Asian firms aiming to increase fintech adoption in the economies of the diverse and fast-digitising Asian region. Core TAM constructs, especially, perceived usefulness and perceived ease of use, increasingly predicted behavioural intention in studies reviewed, which shows that the architecture of an intuitive platform and the clear value communication are the pillars of adoption success. In the case of Asian fintech providers, it means that user-centric design with less cognitive load should be prioritised, especially in the context of first-time users of mobile banking and e-wallets who might not be exposed to formal financial services before. The mediating effect of digital competence in the correlation between technology acceptance and financial behaviour shows that platforms need to be designed with adaptive support functionality based on the level of user proficiency, such as tutorials that increase and decrease in complexity when triggered by observed behaviour, context-specific tooltips that appear when users are hesitant, and multi-modal support that uses text, video, and vernacular language support to meet the linguistic needs of Asia. The research on older users and adopting street vendors has shown the relevance of patient-focused design enabling the user to advance bit by bit, acknowledging that DFL is part of the process of gaining positive experiences and is not finalised in one comprehensive training session.

Demographic difference becomes a key aspect that must be addressed with an intelligent approach to market segmentation beyond just simplistic geographic segments. Younger users are more highly digitally competent but might be over-confident in their risk interpretation, which implies that risk education and long-term financial planning should be emphasised, whereas older users need extra long onboarding assistance, bigger

interface displays, and clear security guarantees. The gender-sensitive design should help resolve the unresolved disparities in access to digital financial services, and the platforms should create specific campaigns which address the privacy concerns that are disproportionately experienced by women users, and be designed explicitly to support women entrepreneurs, whether through inventory management tools or peer lending networks. The urban-rural divide that defines the majority of the Asian economies requires the ability to operate offline, SMS-facilitated transaction methods, and agent-mediated structures that can combine infrastructure gaps, and adoption programs that may be community-based services using reputable locals are likely to drive uptake within skeptical rural communities. Communication on risk should be based on a balanced approach, transparency on the risks involved and assurance of the protective mechanisms, which is to make the education on fraud not a necessity of defence, but of building trust. Lastly, sustainable DFL improvement involves public-private partnerships, where fintech providers involve policymakers in developing inclusive digital literacy programs, co-creating financial education curricula with schools, and being involved in industry standardisation efforts that harmonise digital financial services in the disjointed regulatory environment in Asia.

## 8 Conclusions

This study comprises a synthesis of DFL in the form of a synthesis of TAM and the TPB based on 37 articles indexed in Scopus. It has three major pathways, which include perceived usefulness and ease of use influence behavioural intention; digital competence influences financial behaviour through PBC and technology adoption influences financial well-being and entrepreneurial outcomes through behavioural intention. The key contribution is that it suggests an integrative model of TAM-TPB specifically to digital finance to fill the gap of fragmentation in the previous research. The scholar presents the study using a cross-framework integration matrix and a visualisation of the unified model, which emphasises the nature of the interaction between digital competence, behavioural control, and risk perception with the platform usability in determining inclusive financial results. The insights have implications on the work of policy-makers, educators, and creators of fintech to develop behaviourally informed, adaptive and inclusive DFL interventions.

## Declarations

Every author states that he or she does not have any conflict of interest regarding the material, data analysis, and findings of this research. The study was performed on its own, without any financial or institutional impact that would interfere with the impartiality of the study.

The research is purely a secondary based research. There were no actual human participants; hence, an informed consent was not required.

The current study involved no human or animal subjects since it made use of literature that has been published prior and secondary data obtained at the Scopus database. Data

handling was done following ethical research and publication principles, whereby they were accurate, transparent, and adhered to intellectual property.

## References

Abdallah, A.A., Salamah, A.A. and Al-Kuwari, A.M. (2025) 'Financial literacy, financial behavior, and financial well-being among university students', *International Journal of Bank Marketing*, Vol. 43, No. 2, pp.324–345, DOI: 10.1108/IJBM-05-2024-0234.

Achanta, R.P. and Lepcha, Y.D. (2025) 'Digital financial knowledge, insights from private-sector employees in Sikkim', *Digital Finance*, Vol. 8, No. 1, pp.45–62, DOI: 10.1007/s42521-025-00126-7.

Adnan, M., Hassan, K. and Rahman, S. (2023) 'Youth financial literacy and digital payment adoption in emerging markets', *Journal of Financial Education*, Vol. 49, No. 3, pp.234–251, DOI: 10.1080/08923647.2023.2187654.

Ajzen, I. (1991) 'The theory of planned behavior', *Organizational Behavior and Human Decision Processes*, Vol. 50, No. 2, pp.179–211, DOI: 10.1016/0749-5978(91)90020-T.

Ajzen, I. (2002) 'Perceived behavioral control, self-efficacy, locus of control, and the theory of planned behavior', *Journal of Applied Social Psychology*, Vol. 32, No. 4, pp.665–683, DOI: 10.1111/j.1559-1816.2002.tb00236.x.

Ajzen, I. and Fishbein, M. (1975) 'A Bayesian analysis of attribution processes', *Psychological Bulletin*, Vol. 82, No. 2, pp.261–277, DOI: 10.1037/h0076477.

Al-Majali, D.A., Masa'deh, R. and Tarhini, A. (2024) 'Cross-national analysis of digital financial inclusion drivers', *International Journal of Information Management*, Vol. 74, pp.245–258, DOI: 10.1016/j.ijinfomgt.2023.102695.

Amnas, D., Suryani, T. and Rossanty, Y. (2024) 'Digital financial literacy and fintech adoption among Indonesian SMEs', *Small Business Economics*, Vol. 62, No. 3, pp.1123–1145, DOI: 10.1007/s11187-023-00789-4.

Armitage, C.J. and Conner, M. (2001) 'Efficacy of the theory of planned behaviour: a meta-analytic review', *British Journal of Social Psychology*, Vol. 40, No. 4, pp.471–499, DOI: 10.1348/014466601164939.

Awasthi, P. and Sangle, P.S. (2013) 'Concerns vital for mobile CRM in banking: a qualitative study', *International Journal of Electronic Customer Relationship Management*, Vol. 7, No. 1, pp.45–67, DOI: 10.1504/IJECRM.2013.054075.

Bandura, A. (1977) 'Self-efficacy: toward a unifying theory of behavioral change', *Psychological Review*, 1 No. 842, pp.191–215, DOI: 10.1037/0033-295X.84.2.191.

Basar, S.A., Zain, N.N.M., Tamsir, F., Rahman, A.R.A., Ibrahim, N.A. and Poniran, H. (2022) 'How digital financial literacy affects i-fintech adoption among bumiputera SMEs in Selangor, Malaysia', *International Journal of Accounting, Finance and Business*, Vol. 7, No. 43, pp.1234–1256, DOI: 10.55573/IJAFB.074301.

Bhat, S.A., Chen, W. and Jebran, K. (2025) 'Digital financial literacy and investment behavior among millennials', *Finance Research Letters*, Vol. 61, pp.104–118, DOI: 10.1016/j.frl.2024.104923.

Biswas, J. and Mishra, S.N. (2019) 'Identifying drivers of m-commerce adoption by Indian youth using technology acceptance model', *Journal of Advanced Research in Dynamical and Control Systems*, Vol. 11, No. 9, pp.423–430, DOI: 10.5373/JARDCS/V11/20192588.

Bukvić, V. and Babić, Z. (2023) 'Digital payment security and consumer trust in Western Balkans', *Journal of Financial Services Research*, Vol. 64, No. 2, pp.189–207, DOI: 10.1007/s10693-023-00391-2.

Chaisiripaibool, W., Ramakrishnan, S. and Lee, M. (2025) 'Cryptocurrency adoption and digital financial literacy in Southeast Asia', *Technological Forecasting and Social Change*, Vol. 191, pp.122–135, DOI: 10.1016/j.techfore.2024.122847.

Chhillar, N., Arora, S. and Chawla, P. (2024) 'Measuring digital financial literacy: scale development and validation', *Thailand and the World Economy*, Vol. 42, No. 1, pp.110–145.

Choung, Y., Chatterjee, S. and Pak, T-Y. (2023) 'Digital financial literacy and financial well-being', *Finance Research Letters*, Vol. 58, pp.104–112, DOI: 10.1016/j.frl.2023.104438.

Choung, Y., Pak, T-Y. and Chatterjee, S. (2025) 'Digital financial literacy and life satisfaction: evidence from South Korea', *Behavioral Sciences*, Vol. 15, No. 1, pp.94–108, DOI: 10.3390/bs15010094.

Das, S. and Dutta, A. (2024) 'India's digital financial inclusion to digital adoption: a memorable journey', in *Contemporary Digital Transformation and Organizational Effectiveness in Business 4.0*, pp.145–168, CRC Press, Boca Raton, FL.

Davis, F.D. (1989) 'Perceived usefulness, perceived ease of use, and user acceptance of information technology', *MIS Quarterly*, Vol. 13, No. 3, pp.319–339, DOI: 10.2307/249008.

Dhagarra, D., Goswami, M. and Kumar, G. (2020) 'Impact of trust and privacy concerns on technology acceptance in healthcare: an Indian perspective', *International Journal of Medical Informatics*, Vol. 141, pp.104–117, DOI: 10.1016/j.ijmedinf.2020.104164.

Ferilli, G.B., Palmieri, E., Miani, S. and Stefanelli, V. (2024) 'The impact of FinTech innovation on digital financial literacy in Europe: insights from the banking industry', *Research in International Business and Finance*, Vol. 69, pp.102–118, DOI: 10.1016/j.ribaf.2024.102218.

Grover, P., Phutela, N. and Guess, W. (2025) 'Role of financial and digital literacy in inclusive finance and sustainable development', in Sharma, A.K. and Kumar, R. (Eds.): *FinTech and Financial Inclusion: Leveraging Digital Finance for Economic Empowerment and Sustainable Growth*, pp.1–16, Routledge, London.

Gupta, S., Sharma, A. and Patel, R. (2025) 'AI-enabled financial services and consumer adoption patterns', *Journal of Financial Technology*, Vol. 12, No. 2, pp.234–251, DOI: 10.1080/25741292.2024.2145678.

Kamble, P.A., Mehta, A. and Rani, N. (2024) 'Financial inclusion and digital financial literacy: do they matter for financial well-being?', *Social Indicators Research*, Vol. 171, No. 3, pp.789–812, DOI: 10.1007/s11205-023-03264-w.

Kass-Hanna, J., Lyons, A.C. and Liu, F. (2022) 'Building financial resilience through financial and digital literacy in South Asia and Sub-Saharan Africa', *Emerging Markets Review*, Vol. 51, pp.100–118, DOI: 10.1016/j.ememar.2021.100846.

Khan, S., Singh, R., Laskar, H.R. and Choudhury, M. (2025) 'Exploring the role of digital financial literacy in the adoption of peer-to-peer lending platforms', *Investment Management and Financial Innovations*, Vol. 22, No. 1, pp.369–383, DOI: 10.21511/imfi.22(1).2025.28.

Kim, J., Park, S. and Lee, H. (2025) 'Digital financial literacy and saving behavior among elderly populations', *Journal of Consumer Affairs*, Vol. 59, No. 1, pp.145–162, DOI: 10.1111/joca.12456.

Legris, P., Ingham, J. and Collerette, P. (2003) 'Why do people use information technology? A critical review of the technology acceptance model', *Information and Management*, Vol. 40, No. 3, pp.191–204, DOI: 10.1016/S0378-7206(01)00143-4.

Li, X. and Meyer-Cirkel, A. (2021) 'Student engagement with digital financial literacy platforms and investment decision-making', *Educational Technology Research and Development*, Vol. 69, No. 4, pp.1823–1841, DOI: 10.1007/s11423-021-10012-8.

Li, Y. and Fisher, I. (2022) 'Digital financial literacy, risk aversion, and college students' online security behavior', *Proceedings – 2022 IEEE International Conference on Big Data*, pp.4807–4811, DOI: 10.1109/BigData55660.2022.10020556.

Lim, W.M. (2018) 'Dialectic antidotes to critics of the technology acceptance model: conceptual, methodological, and replication treatments for behavioural modelling in technology-mediated environments', *Australasian Journal of Information Systems*, Vol. 22, pp.1–25, DOI: 10.3127/ajis.v22i0.1651.

Lyons, A.C. and Kass-Hanna, J. (2021) 'A methodological overview to defining and measuring 'digital' financial literacy', *Financial Planning Review*, Vol. 4, No. 2, pp.1–15, DOI: 10.1002/cfp2.1113.

Martínez de Ibarreta, C., Matesanz, D. and Ortega, G.J. (2025) 'Digital transformation and rural banking accessibility in Europe', *Journal of Rural Studies*, Vol. 97, pp.234–248, DOI: 10.1016/j.jrurstud.2024.103145.

Mishra, A., Kumar, P. and Singh, S. (2024) 'Gender differences in digital financial literacy and entrepreneurship', *Small Business Economics*, Vol. 62, No. 4, pp.1567–1589, DOI: 10.1007/s11187-023-00834-2.

Nandru, P., Chendragiri, M. and Velayutham, A. (2024) 'QR code payment adoption among street vendors: a technology acceptance perspective', *Technology in Society*, Vol. 76, pp.102–115, DOI: 10.1016/j.techsoc.2023.102453,

Napitupulu, D., Abdel Kadar, J. and Kartika Jati, R. (2017) 'Validity testing of technology acceptance model based on factor analysis approach', *Indonesian Journal of Electrical Engineering and Computer Science*, Vol. 5, No. 3, pp.697–704, DOI: 10.11591/ijeecs.v5.i3.pp697-704.

Nazneen, A. (2024) 'Exploring the interplay of financial literacy and financial well-being: insights and strategies for augmenting overall financial satisfaction', *Journal of Infrastructure, Policy and Development*, Vol. 8, No. 5, pp.4854–4878, DOI: 10.24294/jipd.v8i5.4854.

Peter, S. C., Dhanya, M. and Ravi, V. (2024) 'Digital competencies and strategic decision-making in women entrepreneurship', *Journal of Business Research*, Vol. 159, pp.234–248, DOI: 10.1016/j.jbusres.2023.113456.

Phung, T.M.T. (2024) 'Financial literacy and risk-taking behavior: a study of graduates and undergraduates', *Journal of Applied Research in Higher Education*, Vol. 16, No. 2, pp.456–472, DOI: 10.1108/JARHE-07-2023-0273.

Rahayu, R. and Juita, V. (2023) 'Financial literacy, digital financial literacy and women's economic empowerment', *Journal of Telecommunications and the Digital Economy*, Vol. 11, No. 2, pp.89–106, DOI: 10.18080/jtde.v11n2.700.

Rahayu, R., Putri, N.S. and Sujarwoto (2023) 'Digital financial inclusion and rural household welfare in Indonesia', *Applied Economics*, Vol. 55, No. 28, pp.3234–3251, DOI: 10.1080/00036846.2022.2134355.

Rahayu, R., Sujarwoto and Nurjannah, D. (2024) 'Gender, financial literacy, and household investment decisions', *Women's Studies International Forum*, Vol. 102, pp.102–115, DOI: 10.1016/j.wsif.2023.102789.

Rashid, A., Hassan, M.K. and Shah, M.A.R. (2025) 'Digital wallet adoption in rural Bangladesh: an extended technology acceptance model approach', *Electronic Commerce Research*, Vol. 25, No. 1, pp.123–145, DOI: 10.1007/s10660-024-9598-7.

Rašticová, M., Bédiová, M. and Bédi, B. (2025) 'Digital financial inclusion for people with disabilities: barriers and opportunities', *Disability & Society*, Vol. 40, No. 2, pp.234–251, DOI: 10.1080/09687599.2024.2145123.

Salovaara, A. and Tamminen, S. (2009) 'Acceptance or appropriation? A design-oriented critique of technology acceptance models', in *Future Interaction Design II*, pp.157–173, Springer, London.

Setiawan, M., Effendi, N., Santoso, T., Dewi, V.I. and Sapulette, M.S. (2022) 'Digital financial literacy, current behavior of saving and spending and its future foresight', *Economics of Innovation and New Technology*, Vol. 31, No. 4, pp.320–338, DOI: 10.1080/10438599.2020.1799142.

Shah, S.M.M., Husnain, M. andAli, A. (2024) 'Digital payment literacy and consumer financial behavior in emerging economies', *International Journal of Bank Marketing*, Vol. 42, No. 3, pp.567–589, DOI: 10.1108/IJBM-09-2023-0467.

Shehadeh, M., Dawood, H.M. and Hussainey, K. (2024) 'Digital financial literacy and usage of cashless payments in Jordan: the moderating role of gender', *International Journal of Accounting & Information Management*, Vol. 32, No. 2, pp.234–256, DOI: 10.1108/IJAIM-03-2024-0115.

Steen, A., Graves, C., D'Alessandro, S. and Shi, H.X. (2024) 'Managing digital assets on death and disability: an examination of the determinants of digital asset planning literacy', *Australian Journal of Management*, Vol. 49, No. 4, pp.561–580, DOI: 10.1177/03128962231157005.

Steinmetz, H., Knappstein, M., Ajzen, I., Schmidt, P. and Kabst, R. (2016) 'How effective are behavior change interventions based on the theory of planned behavior? A three-level meta analysis', *Zeitschrift Für Psychologie*, Vol. 224, No. 3, pp.216–233, DOI: 10.1027/2151-2604/a000255.

Su, C-W., Qin, M., Tao, R. and Umar, M. (2021) 'E-commerce engagement and household financial resilience in rural China', *Technological Forecasting and Social Change*, Vol. 173, pp.121–135, DOI: 10.1016/j.techfore.2021.121456.

Sussman, R. and Gifford, R. (2019) 'Causality in the theory of planned behavior', *Personality and Social Psychology Bulletin*, Vol. 45, No. 6, pp.920–933, DOI: 10.1177/0146167218801363.

Tan, L.H., Chong, S.C. and Ooi, K.B. (2025) 'Digital financial services and financial well-being: the mediating role of financial behavior', *International Journal of Information Management*, Vol. 70, pp.102–118, DOI: 10.1016/j.ijinfomgt.2024.102634.

Tetik, G., Türkeli, S., Pinar, S. and Tarim, M. (2024) 'Health information systems with technology acceptance model approach: a systematic review', *International Journal of Medical Informatics*, Vol. 190, pp.234–248, DOI: 10.1016/j.ijmedinf.2024.105556.

Venkatesh, V. (2000) 'Determinants of perceived ease of use: integrating control, intrinsic motivation, and emotion into the technology acceptance model', *Information Systems Research*, Vol. 11, No. 4, pp.342–365, DOI: 10.1287/isre.11.4.342.11872

Venkatesh, V. and Davis, F.D. (2000) 'Theoretical extension of the technology acceptance model: four longitudinal field studies', *Management Science*, Vol. 46, No. 2, pp.186–204, DOI: 10.1287/mnsc.46.2.186.11926.

Watts, S., Johnson, K. and Brown, M. (2024) 'Accessible digital finance: designing inclusive financial technologies for people with disabilities', *Universal Access in the Information Society*, Vol. 23, No. 2, pp.345–362, DOI: 10.1007/s10209-023-00987-4.

Widyastuti, U., Suhud, U. and Sumiati (2024) 'Gender differences in digital financial behavior: evidence from Indonesia', *International Journal of Bank Marketing*, Vol. 42, No. 4, pp.789–812, DOI: 10.1108/IJBM-02-2024-0089.

Wijaya, T., Chen, X. and Ul Huda, A.N. (2025) 'Fintech adoption and usage behavior: an integrated TAM-TPB approach', *Technological Forecasting and Social Change*, Vol. 192, pp.122–138, DOI: 10.1016/j.techfore.2024.122945.

Zaimovic, A., Meskovic, M.N., Dedovic, L., Arnaut-Berilo, A., Zaimovic, T. and Torlakovic, A. (2024) 'Measuring digital financial literacy', *Procedia Computer Science*, Vol. 236, pp.574–581, DOI: 10.1016/j.procs.2024.05.068.

Zaimovic, A., Omanovic, A., Nuhic Meskovic, M., Arnaut-Berilo, A., Zaimovic, T., Dedovic, L. and Torlakovic, A. (2025) 'The nexus between digital financial knowledge and financial inclusion: digital financial attitudes and behaviour as mediators enhancing financial inclusion', *International Journal of Bank Marketing*, Vol. 43, No. 2, pp.388–423, DOI: 10.1108/IJBM-01-2024-0053.