Fintech Use And Consumer Financial Well-Being Among Young Consumers In Saudi Arabia: The Role Of Digital Financial Literacy And Trust

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Abstract

The rapid expansion of financial technologies (FinTech) has reshaped the delivery and use of financial services, raising important questions about their implications for financial well-being among young consumers. The effectiveness of FinTech is shaped not only by technological availability but also by users' cognitive capabilities, trust perceptions, and behavioral engagement with digital financial services, which are particularly critical during early stages of financial independence. This study examines how the use of FinTech, digital financial literacy, and trust in FinTech services jointly influence young consumers' financial well-being in the Saudi Arabian context. Specifically, the study investigates the direct effects of FinTech use and digital financial literacy, the role of trust in shaping FinTech use, and the moderating and indirect mechanisms linking these constructs. The study adopts a quantitative research design and employs Partial Least Squares Structural Equation Modeling (PLS-SEM) to analyze survey data collected from young Saudi consumers. The measurement and structural models are rigorously assessed to ensure reliability, validity, and robustness of the proposed relationships. The findings reveal that FinTech use significantly enhances financial well-being among young consumers and that digital financial literacy plays a crucial role as both a direct determinant and a moderator, strengthening the positive impact of FinTech use. Trust in FinTech services significantly encourages FinTech use and indirectly improves financial well-being by increasing digital financial engagement. These results highlight that the benefits of FinTech are not automatic but depend on young consumers' financial capabilities and confidence in digital financial systems. The study offers important implications for policymakers and practitioners in Saudi Arabia, underscoring the need to complement FinTech expansion with youth-oriented digital financial literacy initiatives and trust-enhancing regulatory frameworks to ensure that digital financial transformation contributes to sustainable improvements in young consumers' financial well-being, in line with the objectives of Vision 2030.

Keywords: FinTech use, Digital financial literacy, Trust in FinTech services, young consumers' financial well-being, PLS-SEM, Saudi Arabia

Introduction

Young consumers are among the most active and digitally engaged segments in contemporary financial systems, particularly in rapidly transforming economies such as Saudi Arabia. This group is in the early stages of financial independence, during which initial financial behaviors, attitudes toward digital financial services, and perceptions of trust are formed and may have long-term consequences for financial well-being. In recent years, young consumers have become intensive users of FinTech applications, including mobile banking, digital payments, and electronic wallets, making them a particularly relevant population for examining the welfare implications of digital financial innovation.

The rapid expansion of financial technologies (FinTech) has fundamentally transformed how young consumers access, manage, and use financial services. Digital payments, mobile banking applications, and online financial platforms have become integral components of modern financial systems, reshaping consumer financial behavior and redefining traditional notions of financial inclusion (Ozili, 2018; Carlin et al., 2019). As FinTech adoption accelerates globally, scholarly attention has increasingly focused on its broader implications for individual financial outcomes, particularly consumer financial well-being. Beyond technological infrastructure, the impact of FinTech critically depends on how individuals cognitively process digital financial information, emotionally perceive trust and risk, and behaviorally engage with digital financial systems.

Recent empirical studies indicate that FinTech use can enhance financial well-being by improving convenience, efficiency, and access to financial services, thereby enabling individuals to manage their financial resources more effectively (Carlin et al., 2019; Morgan et al., 2019). However, emerging evidence suggests that the benefits of

FinTech adoption are not automatic or uniformly distributed across users. The impact of FinTech varies depending on users' financial behaviors, product types, and individual capabilities, particularly when digital financial services involve credit-based applications. These findings underscore the importance of considering user characteristics—especially among young consumers—when assessing the welfare implications of FinTech.

In this context, digital financial literacy has been increasingly recognized as a critical factor influencing financial outcomes in digital environments. Lusardi and Mitchell (2014) emphasize that financial literacy plays a central role in shaping individuals' financial decision-making and long-term financial well-being. More recent studies extend this perspective by highlighting the importance of digital financial literacy in enabling consumers to navigate complex digital financial products and mitigate potential risks (Lyons & Kass-Hanna, 2021; Choung et al., 2023). Individuals with higher levels of digital financial literacy are better equipped to utilize FinTech services effectively, avoid costly financial mistakes, and derive greater benefits from digital financial innovation. This capability is particularly crucial for young consumers, who are still developing financial experience and habits.

Another important strand of the literature highlights the role of trust in FinTech services as a key determinant of adoption and continued use. Prior research demonstrates that trust reduces perceived uncertainty and risk in digital financial environments, thereby encouraging consumers to engage with FinTech platforms (Gefen et al., 2003; Baabdullah, 2018). More recent studies further suggest that trust not only influences adoption decisions but also shapes usage intensity and satisfaction with digital financial services (Okat et al., 2025). Despite this growing body of evidence, the indirect role of trust in enhancing consumer financial well-being through FinTech use remains underexplored, particularly among young consumers who may be more sensitive to perceived digital risks and security concerns.

Although the existing literature provides valuable insights into FinTech adoption and financial well-being, several research gaps persist. First, many studies focus primarily on direct relationships between FinTech use and financial outcomes, offering limited examination of interactive and conditional mechanisms. Second, empirical evidence on the moderating role of digital financial literacy in the relationship between FinTech use and financial well-being remains fragmented, with mixed findings across contexts. Third, while mediation mechanisms have been conceptually discussed, relatively few studies empirically test whether trust influences financial well-being indirectly through FinTech use. Finally, much of the existing empirical work concentrates on advanced economies, leaving emerging and transforming financial systems, and young consumer populations within them, underrepresented in the literature.

These gaps are especially relevant in Saudi Arabia, where the digital transformation of the financial sector is a core pillar of Vision 2030. The Saudi financial ecosystem has experienced rapid growth in FinTech adoption, supported by regulatory initiatives, digital infrastructure development, and increasing engagement of young consumers with digital financial services (SAMA, 2022). However, despite this rapid transformation, empirical evidence on how FinTech use affects the financial well-being of young consumers, and how digital financial literacy and trust shape this relationship, remains limited. Addressing this gap is crucial for ensuring that digital financial innovation contributes to inclusive and sustainable improvements in youth financial welfare.

Against this backdrop, the present study investigates the relationships between FinTech use, digital financial literacy, trust in FinTech services, and consumer financial well-being among young consumers in Saudi Arabia. Specifically, the study examines: (i) the direct effects of FinTech use and digital financial literacy on consumer financial well-being; (ii) the influence of trust in FinTech services on FinTech use; (iii) the moderating role of digital financial literacy in the FinTech use–financial well-being relationship; and (iv) the indirect effect of trust on financial well-being through FinTech use. To achieve these objectives, the study employs a Partial Least Squares Structural Equation Modeling (PLS-SEM) approach, which allows for the simultaneous assessment of direct, moderating, and mediating relationships.

This study contributes to the literature in several important ways. First, it integrates FinTech use, digital financial literacy, and trust into a unified empirical framework to explain financial well-being among young consumers. Second, it provides new evidence on both moderating and mediating mechanisms that have received limited empirical attention in prior research. Third, it offers context-specific insights from Saudi Arabia, thereby extending the existing literature on FinTech and financial well-being to a rapidly transforming, youth-focused emerging digital economy.

The remainder of the paper is organized as follows. Section 2 reviews the relevant literature and develops the research hypotheses. Section 3 outlines the research methodology and data collection procedures. Section 4 presents the evaluation of the measurement model, while Section 5 reports the structural model results and hypothesis testing. Section 6 discusses the findings in light of prior studies and the Saudi context. Finally, Section 7 concludes the paper by summarizing the key findings, discussing policy and managerial implications, and suggesting directions for future research.

1. Conceptual Framework

This study develops a young-consumer–oriented conceptual framework to explain how the use of financial technology (FinTech) affects the financial well-being of young consumers in Saudi Arabia. The framework integrates behavioral, cognitive, and perceptual dimensions to capture the mechanisms through which digital financial services translate into financial outcomes at the individual level, particularly during the early stages of financial independence.

1.1 FinTech Use

FinTech use refers to the extent to which young consumers actively engage with digital financial services, including mobile banking, digital payments, electronic wallets, and app-based financial management tools. Prior empirical studies suggest that FinTech adoption enhances convenience, reduces transaction costs, and improves access to financial services, thereby potentially supporting better financial management (Ozili, 2018; Carlin et al., 2019). However, recent evidence also highlights that certain FinTech products, particularly credit-enabled digital services, may encourage impulsive spending and over-borrowing, risks that are especially relevant for young consumers who are still developing financial experience and self-control. Such behaviors may adversely affect financial well-being if not accompanied by adequate financial capability.

1.2 Consumer Financial Well-being

Consumer financial well-being represents individuals' perceived ability to manage current financial obligations, cope with unexpected expenses, and maintain confidence in their future financial security. Among young consumers, financial well-being is particularly important, as this group is often at the beginning of its financial life cycle and may face limited income stability, evolving financial responsibilities, and heightened exposure to digital financial products. Unlike objective indicators such as income or wealth, financial well-being captures subjective evaluations of financial control and stress. This construct has been widely adopted in consumer finance research as a comprehensive measure of financial outcomes at the individual and household levels (Brüggen et al., 2017; Netemeyer et al., 2018).

1.3 Digital Financial Literacy

Digital financial literacy reflects young consumers' ability to understand digital financial products, assess associated risks, and use FinTech services effectively and safely. As financial services become increasingly digitalized, traditional financial literacy alone is insufficient to explain financial outcomes, particularly for younger users who rely heavily on mobile and app-based platforms. Empirical research shows that higher levels of digital financial literacy enable consumers to make informed financial decisions, avoid misuse of digital financial tools, and translate FinTech access into improved financial well-being (Lusardi & Mitchell, 2014; Lyons & Kass-Hanna, 2021). In this framework, digital financial literacy is conceptualized as a moderating factor that strengthens the relationship between FinTech use and consumer financial well-being.

1.4 Trust in FinTech Services

Trust in FinTech services refers to young consumers' confidence in the security, reliability, and integrity of digital financial platforms and service providers. Trust reduces perceived risk and uncertainty associated with digital transactions and plays a critical role in shaping willingness to adopt and continue using FinTech services, especially among young users who may have limited prior experience with formal financial institutions. Prior studies consistently demonstrate that trust is a key determinant of technology acceptance in financial contexts and indirectly influences financial outcomes by lowering financial anxiety (Gefen et al., 2003; Carlin et al., 2019). Within this framework, trust is modeled as a behavioral mechanism that influences FinTech use and, in turn, contributes indirectly to consumer financial well-being.

1.5 Socio-Demographic Controls

To isolate the core relationships, the framework controls for key socio-demographic characteristics, including age, gender, education level, and employment status. These factors have been shown to systematically influence financial behavior, technology adoption, and financial well-being and are particularly relevant when studying young consumers, whose financial behaviors and capabilities may vary significantly across demographic groups (Brüggen et al., 2017; Netemeyer et al., 2018).

2. Theoretical Framework

The theoretical framework of this study integrates insights from consumer finance theory, human capital theory, and technology acceptance theories to explain how FinTech use affects financial well-being among young consumers. These theoretical perspectives are particularly relevant for understanding financial outcomes in the early stages of financial independence, when behavioral patterns, financial capabilities, and perceptions of trust are still forming.

2.1 Consumer Finance Theory

Consumer finance theory emphasizes that financial outcomes are shaped by individuals' financial behaviors, constraints, and decision-making processes rather than access to financial products alone. From this perspective, financial well-being depends on how consumers manage financial resources, assess risks, and utilize available financial services. Among young consumers, this theory is especially relevant, as financial behaviors and habits are still evolving and may be more susceptible to behavioral biases. In the context of FinTech, consumer finance theory explains why digital access may improve financial well-being for some young consumers while increasing financial stress for others, particularly when technology facilitates easy borrowing, impulsive spending, or limited consideration of long-term consequences (Brüggen et al., 2017).

2.2 Human Capital Theory and Digital Financial Literacy

Human capital theory posits that knowledge and skills are productive assets that enhance individuals' economic outcomes. Financial literacy has long been recognized as a key component of human capital, improving financial decision-making and household financial outcomes (Lusardi & Mitchell, 2014). As financial services increasingly rely on digital platforms, this perspective naturally extends to digital financial literacy, which is particularly critical for young consumers who rely heavily on mobile and app-based services. Young consumers with higher digital financial literacy are better equipped to understand complex FinTech products, evaluate costs and risks, and avoid costly financial mistakes, thereby enhancing their financial well-being (Lyons & Kass-Hanna, 2021). This theoretical perspective explains why similar levels of FinTech access may lead to heterogeneous financial outcomes across young consumers, depending on their digital financial capabilities.

2.3 Technology Acceptance Theories and Trust

Technology acceptance theories, particularly the Technology Acceptance Model (TAM) and its extensions, explain technology adoption in terms of perceived usefulness, ease of use, and behavioral intentions (Davis, 1989). In digital financial environments, subsequent extensions of these models highlight trust as a critical determinant of adoption and continued usage. Trust reduces perceived risk and uncertainty in online financial transactions and fosters sustained engagement with FinTech services (Gefen et al., 2003). This mechanism is especially relevant for young consumers, who may have limited prior experience with formal financial institutions and therefore rely more heavily on trust perceptions when engaging with digital financial platforms. In this study, trust is conceptualized as a key theoretical mechanism linking FinTech use to consumer financial well-being.

2.4 Integrating the Theoretical Perspectives

By integrating consumer finance theory, human capital theory, and technology acceptance theories, this study provides a comprehensive theoretical foundation for understanding the heterogeneous effects of FinTech use on financial well-being among young consumers. This integrated framework is particularly relevant in the Saudi Arabian context, where rapid FinTech diffusion under Vision 2030 has expanded young consumers' access to digital finance, while individual differences in literacy and trust continue to shape financial outcomes.

The integration of these theoretical perspectives provides a coherent rationale for selecting the variables and relationships proposed in this study. Consumer finance theory establishes financial well-being as the ultimate outcome of financial behaviors and decisions, emphasizing that consumer welfare depends not merely on access to financial products but on how such products are used and managed. This perspective justifies positioning financial well-being as the dependent variable and FinTech use as a key behavioral determinant influencing young consumers' financial outcomes. Human capital theory complements this view by explaining why similar levels of FinTech access may lead to different financial outcomes across young consumers. Differences in knowledge and skills shape individuals' ability to evaluate financial products, understand risks, and make informed decisions. In a digital financial environment, this theoretical lens supports the inclusion of digital financial literacy as a critical individual capability that conditions the effectiveness of FinTech use. Accordingly, digital financial literacy is conceptualized as a factor that can strengthen or weaken the translation of FinTech use into improved financial well-being. Technology acceptance theories further enrich the framework by focusing on the psychological mechanisms underlying technology usage. These theories suggest that perceived usefulness and ease of use are insufficient to explain sustained engagement with digital financial services in high-risk, information-intensive contexts. Trust emerges as a central construct that reduces uncertainty, encourages continued use, and mitigates financial anxiety associated with digital transactions. This theoretical insight justifies modeling trust as a behavioral mechanism that influences FinTech use and indirectly contributes to financial well-being. Together, these theories form an integrated explanatory structure in which FinTech use represents young consumers' financial behavior, digital financial literacy captures individual capability, and trust reflects perceptual and psychological readiness. Financial well-being is positioned as the cumulative outcome of these interacting mechanisms. This integration supports a conceptual model in which behavioral, cognitive, and perceptual factors jointly explain how digital financial services affect youth financial welfare, providing a clear, theoretically grounded foundation for the proposed empirical analysis (Figure 1)

Figure 1. Conceptual framework of the study

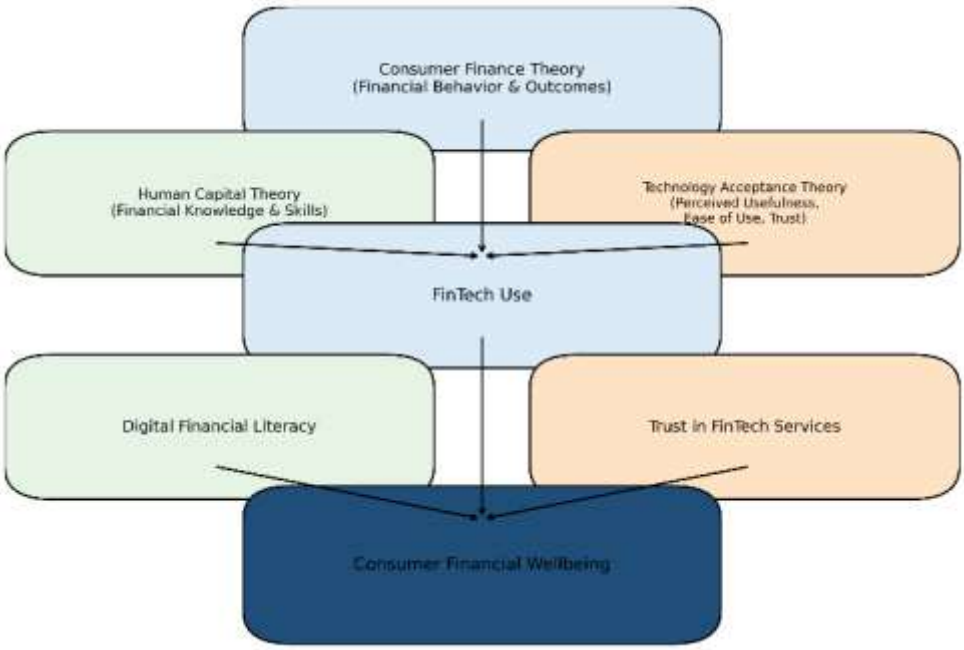


Figure 1. The figure presents an integrated conceptual framework linking consumer finance theory, human capital theory, and technology acceptance theory to explain the relationship between FinTech use and consumer financial well-being. The model illustrates how FinTech use serves as the core behavioral mechanism through which digital financial services influence financial well-being. In contrast, digital financial literacy and trust in FinTech services operate as key explanatory mechanisms shaping this relation.

2. Literature Review and Hypothesis Development

3.1 FinTech Use and Consumer Financial Well-being

Recent literature highlights the transformative role of financial technology (FinTech) in shaping consumer financial behavior and outcomes. FinTech services, such as mobile banking, digital payments, and app-based financial management tools, have expanded consumers' access to financial services while altering how individuals manage daily financial activities. These effects are particularly pronounced among young consumers, who are typically early adopters of digital financial technologies and rely heavily on mobile-based financial solutions. Empirical evidence suggests that FinTech adoption can enhance financial convenience, reduce transaction costs, and improve budgeting and payment efficiency, thereby supporting higher levels of consumer financial well-being (Ozili, 2018; Carlin et al., 2019).

Prabhakaran and Mynavathi (2025) examine whether the use of financial technology affects the relationship among financial literacy, financial behavior, and financial well-being. Using a moderated mediation model, the study shows that financial literacy positively influences responsible financial behavior, which in turn enhances individuals' subjective financial well-being, while FinTech usage moderates the strength of these links depending on its level. The findings suggest that financially literate individuals benefit more from FinTech applications when they use them effectively to control spending, saving, and investment, which contributes to a greater sense of security and resilience to financial shocks. This mechanism is especially relevant for young consumers, whose financial habits and coping strategies are still developing.

Choung et al. (2023) focus on digital financial literacy and its relationship with financial well-being, emphasizing two main components: digital financial knowledge and the ability to protect oneself from online financial fraud. Based on survey data and regression analysis, they find that individuals with higher digital financial literacy tend to make more informed financial decisions, use digital channels more efficiently, and show greater caution regarding security risks, which in turn improves indicators of financial well-being, such as the ability to meet unexpected expenses and confidence about future finances. These findings underscore the importance of digital financial skills for young consumers, who may be more exposed to online financial risks.

Başar et al. (2025) investigate the relationship between digital financial literacy, the use of FinTech tools, and saving behavior using a multi-country sample. The results indicate that individuals with higher digital financial literacy are more likely to use a wider range of digital financial platforms, such as e-wallets, investment applications, and automated saving tools, and that this use is associated with stronger formal saving behavior and greater engagement in long-term financial planning. This evidence suggests that FinTech can serve as a practical channel for translating financial knowledge into saving and planning behaviors, which is particularly important for young consumers seeking to build financial stability early in life.

In addition, Gafoor and Amilan (2024) examine the effect of FinTech adoption on the financial well-being of persons with disabilities, focusing on the mediating roles of financial behavior, financial access, and financial knowledge.

Using PLS-SEM, the results show that FinTech adoption does not directly affect financial well-being; rather, its impact is fully mediated by financial access, financial knowledge, and financial behavior. This finding reinforces the idea that FinTech outcomes depend on how users interact with digital financial tools, a mechanism that is also highly relevant for young consumers.

In the context of rapidly digitalizing financial systems, such as those in Saudi Arabia, FinTech use is therefore expected to play a significant role in influencing young consumers' financial well-being. However, its ultimate effect depends on how young consumers interact with, understand, and manage digital financial tools.

H1: FinTech use is significantly associated with consumer financial well-being among young consumers in Saudi Arabia.

3.2 Digital Financial Literacy and Financial Well-being

Financial literacy has long been recognized as a key determinant of sound financial decision-making and household financial outcomes. Individuals with higher levels of financial literacy are better equipped to manage resources, evaluate financial products, and avoid costly financial mistakes (Lusardi & Mitchell, 2014). As financial services increasingly migrate to digital platforms, scholars have extended this concept to digital financial literacy, which incorporates both financial knowledge and digital competence. Digital financial literacy is particularly important for young consumers, who rely heavily on mobile applications and online financial platforms for managing their finances.

Recent empirical studies demonstrate that digital financial literacy plays a critical role in enabling consumers to navigate complex FinTech services effectively. Lyons and Kass-Hanna (2021) show that individuals with higher digital financial literacy are less financially vulnerable and better able to leverage digital financial services to their advantage. Similarly, Morgan et al. (2019) find that digital literacy enhances individuals' ability to use financial technologies responsibly, leading to better financial outcomes.

Aulia et al. (2023) examine the relationship between digital financial literacy and financial well-being and assess the moderating role of financial behavior. Their findings indicate a significant positive effect of digital financial literacy on financial well-being and show that individuals with more responsible financial behavior benefit more from digital financial literacy. Prabhakaran and Mynavathi (2023) further demonstrate that financial literacy strengthens positive perceptions of FinTech benefits and increases confidence in using digital financial applications, which is particularly relevant for young consumers who are still developing financial self-efficacy.

Islam and Khan (2024) conclude that financial literacy, digital literacy, and financial self-efficacy jointly explain FinTech adoption behavior, suggesting that the combination of knowledge, digital skills, and confidence increases the likelihood that individuals will use mobile banking and digital payment services. Kakinuma (2024) offers a complementary perspective by showing that frequent FinTech usage can itself enhance financial literacy over time, implying a dynamic relationship between literacy and technology use that may be especially pronounced among young consumers.

H2: Digital financial literacy has a positive effect on consumer financial well-being among young consumers.

3.3 Trust, FinTech Use, and Financial Outcomes

Policy-oriented work by the OECD (2017) emphasizes that trust and digital financial literacy are essential for ensuring that FinTech adoption contributes to sustainable financial well-being. Trust has been consistently identified as a fundamental factor in the adoption and continued use of digital financial services, particularly in environments characterized by data security and privacy concerns.

Empirical research confirms that trust significantly influences consumers' willingness to adopt and use FinTech services (Gefen et al., 2003; Carlin et al., 2019). This mechanism is especially relevant for young consumers, who may have limited prior experience with formal financial institutions and therefore rely more heavily on trust perceptions when engaging with digital platforms. Beyond adoption, trust indirectly contributes to financial well-being by reducing anxiety and uncertainty associated with digital transactions and by encouraging sustained use of FinTech services.

H3: Trust in FinTech services positively influences young consumers' use of FinTech.

3.4 The Moderating Role of Digital Financial Literacy

While FinTech services offer significant potential benefits, their effectiveness largely depends on consumers' ability to use them wisely. Digital financial literacy is therefore expected to moderate the relationship between FinTech use and financial well-being. Young consumers with higher digital financial literacy are better able to evaluate digital financial products, understand associated costs and risks, and use FinTech tools strategically rather than impulsively.

Empirical evidence supports this moderating role. Lyons and Kass-Hanna (2021) argue that digital financial literacy enables consumers to translate financial access into tangible welfare gains, while insufficient literacy may amplify financial vulnerability. Hasmah et al. (2025) further show that digital financial literacy enhances financial decision-making, increases FinTech adoption, and ultimately improves financial well-being.

H4: Digital financial literacy positively moderates the relationship between FinTech use and young consumers' financial well-being.

3.5 Trust as an Explanatory Mechanism

Trust is also expected to play an explanatory role in linking FinTech use to financial well-being. By reducing perceived risk and enhancing confidence in digital financial services, trust facilitates sustained engagement with FinTech platforms and supports more stable financial behavior. Technology acceptance research suggests that trust complements perceived usefulness and ease of use in explaining technology-driven outcomes (Gefen et al., 2003). In consumer finance contexts, greater trust in digital financial platforms has been associated with higher financial satisfaction and lower financial stress. Carlin et al. (2019) demonstrate that trust indirectly enhances financial outcomes by strengthening the effectiveness of FinTech adoption.

H5: Trust in FinTech services indirectly enhances consumer financial well-being among young consumers through its effect on FinTech use

Based on the hypothesis above, the research framework is presented as follows:

Figure 2: Research Framework

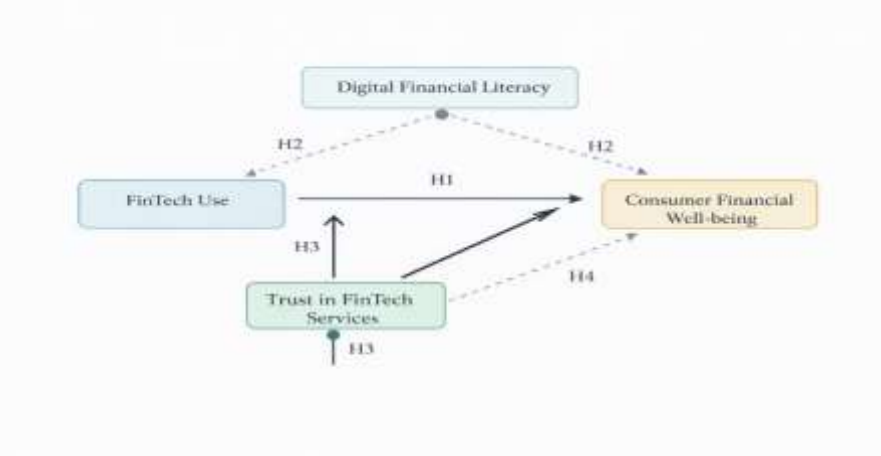


Figure 2 illustrates the study's conceptual framework, depicting the hypothesized relationships among FinTech use, digital financial literacy, trust in FinTech services, and consumer financial well-being. The framework presents the direct effects of FinTech use and digital financial literacy on consumer financial well-being (H1 and H2), the influence of trust in FinTech services on FinTech use (H3), and the moderating role of digital financial literacy in the relationship between FinTech use and consumer financial well-being (H4). In addition, the model incorporates an indirect (mediated) relationship whereby trust in FinTech services influences consumer financial well-being through FinTech use (H5).

Synthesis of Prior Literature, Research Gaps, and Contribution of the Present Study

The existing literature provides substantial evidence that financial technology has become a key driver of change in consumer finance, influencing how individuals access, manage, and interact with financial services. Prior empirical studies document that FinTech adoption improves convenience, accessibility, and efficiency in financial transactions, with potential positive implications for consumers' financial outcomes. Recent research has increasingly shifted toward consumer-level analyses, showing that the effects of FinTech are not uniform and depend on behavioral, cognitive, and institutional factors. These heterogeneities are particularly salient among young consumers, who are often early adopters of digital financial services but may differ widely in financial capability, experience, and risk awareness. Studies examining financial well-being emphasize that digital financial services can enhance perceived financial control and security; however, they may also exacerbate financial stress when used without sufficient knowledge, skills, or confidence, conditions that are especially relevant during early stages of financial independence. Despite these advances, several important gaps remain in the literature. First, most empirical studies focus on advanced economies or broad cross-country samples, with limited attention to the Middle Eastern context and, more specifically, to young consumer populations within this region. Given the rapid expansion of digital financial services under Saudi Vision 2030 and the central role of youth in driving FinTech adoption, the lack of youth-focused evidence in Saudi Arabia represents a significant limitation. Second, existing studies often examine FinTech adoption as a direct determinant of financial well-being, without sufficiently accounting for the mechanisms through which this relationship operates. In particular, digital financial literacy and trust are frequently analyzed in isolation rather than within an integrated framework that explains how they jointly shape financial outcomes among young consumers. Third, while prior research recognizes the importance of financial literacy, relatively few studies explicitly treat digital financial literacy as a distinct construct capturing the competencies required to navigate technology-driven financial services, which are especially critical for younger users who rely heavily on digital platforms. Finally, most studies rely on adoption intentions or usage frequency as outcome variables, placing limited emphasis on subjective financial well-being as a comprehensive measure

capturing perceived security, control, and resilience, dimensions that are particularly meaningful for young consumers at formative stages of their financial lives.

The present study addresses these gaps by offering a young consumer–centered empirical investigation of FinTech use and financial well-being in Saudi Arabia. By integrating digital financial literacy and trust within a unified conceptual framework, this research moves beyond a purely adoption-focused perspective and provides a more nuanced explanation of how FinTech affects financial welfare among young consumers. The study contributes to the literature by (i) extending consumer finance and technology acceptance research to young consumers in the Saudi context, (ii) empirically distinguishing the roles of digital financial literacy and trust in shaping financial well-being during early stages of financial independence, and (iii) employing a multidimensional measure of consumer financial well-being that captures perceived security, control, and financial resilience. In doing so, the study provides timely, theoretically grounded, and policy-relevant evidence, offering valuable insights for regulators, financial institutions, and policymakers seeking to enhance the financial well-being of young consumers in an increasingly digitalized financial system

3. Methodology

4.1 Research Design and Data Collection

This study employs a quantitative research design using primary survey data to examine the relationship between FinTech use and financial well-being among young consumers in Saudi Arabia. The survey method is particularly appropriate for this study, as the primary variables, FinTech use, digital financial literacy, trust, and financial well-being, are perceptual and behavioral constructs that are especially relevant for young consumers and cannot be directly observed using secondary data sources. A structured questionnaire was developed following an extensive review of prior empirical studies on consumer finance, youth financial behavior, and financial technology adoption. To ensure clarity, relevance, and content validity, the questionnaire was reviewed and refined through informal discussions with academic colleagues specializing in finance and digital transformation. Minor adjustments were made to improve wording and ensure the questions were easily understood by young respondents with diverse educational and socio-demographic backgrounds. The final questionnaire was administered online via Google Forms, a data-collection approach well suited to young consumers who are highly familiar with digital platforms. Participation was voluntary, and respondents were informed that their responses would be used solely for academic research, ensuring anonymity and ethical compliance

4.2 Sample Selection and Survey Administration

The target population of this study consists of young consumers in Saudi Arabia, operationalized as undergraduate students enrolled at Imam Mohammad Ibn Saud Islamic University (IMSIU). This group is among the most active in FinTech adoption, given their high digital engagement, frequent use of mobile financial applications, and early exposure to independent financial decision-making. Focusing on university students is particularly appropriate, as young consumers are at a formative stage in their financial lives, during which digital financial behaviors, literacy, and perceptions of trust can have lasting effects on financial well-being. Although the sample is drawn from a single public university, it reflects a diverse population of young consumers across socio-demographic backgrounds and fields of study, making it suitable for examining FinTech-related financial behaviors among Saudi youth. The survey was distributed electronically through social media platforms (including LinkedIn and WhatsApp) and academic and professional networks between January and May 2025.

This period was chosen to capture recent consumer experiences with FinTech services in Saudi Arabia, particularly in light of the rapid digital transformation promoted under Vision 2030. In total, 420 questionnaires were initially distributed. A total of 347 responses were received, corresponding to an approximately 82.6% response rate. After screening the data, 47 questionnaires were excluded due to incomplete responses or missing information in key variables. The final sample, therefore, consisted of 300 valid questionnaires, which were retained for the empirical analysis. This final sample size exceeds the minimum requirements for multivariate regression analysis and is consistent with sample sizes commonly used in consumer finance and FinTech research.

Table 2: Number of Research Questionnaires

Description	Total Questionnaires
Distributed questionnaires	420
Returned questionnaires	347
Incomplete/invalid questionnaires	47
Valid and usable questionnaires	300

4.3 Measurement of Variables

All variables in this study were measured using the same questionnaire, ensuring internal consistency and coherence in data collection. Responses were recorded using a five-point Likert scale, ranging from 1 (“strongly disagree”) to 5 (“strongly agree”), unless otherwise stated.

4.3.1 Dependent Variable: Consumer Financial Well-being

Consumer financial well-being was measured using items adapted from the Consumer Financial Protection Bureau (CFPB) financial well-being framework. The CFPB framework was adopted because it provides a comprehensive, behavior-oriented measure of financial well-being that focuses on individuals' perceived financial control, security, and ability to meet current and future financial needs. This approach is particularly appropriate for assessing financial well-being among young consumers, who are often at early stages of financial independence and may face evolving financial responsibilities, income uncertainty, and heightened exposure to digital financial products. The CFPB-based measure is also highly relevant to the Saudi context, where Vision 2030 emphasizes strengthening household financial resilience, promoting financial literacy, and ensuring that digital financial transformation leads to sustainable and inclusive financial outcomes. The items capture respondents' perceived ability to manage daily expenses, cope with unexpected financial shocks, and feel secure about their financial future, dimensions that are especially meaningful for young consumers as they build financial stability. A composite financial well-being index was constructed by averaging responses across all well-being items, with higher values indicating greater perceived financial well-being.

4.3.2 Independent Variable: FinTech Use

FinTech use reflects the extent to which respondents actively use digital financial services. This variable was measured using multiple items that capture the frequency and intensity of use of services such as mobile banking, digital payments, electronic wallets, and online financial management tools. A composite FinTech use index was calculated by averaging the relevant items.

4.3.3 Moderating Variable: Digital Financial Literacy

Digital financial literacy was measured by assessing respondents' ability to understand digital financial products, evaluate associated risks, and use FinTech services safely and effectively. The items combine elements of traditional financial literacy with digital competence, reflecting the hybrid nature of financial decision-making in digital environments.

4.3.4 Mediating Variable: Trust in FinTech Services

Trust in FinTech services captures respondents' confidence in the security, reliability, and integrity of digital financial platforms. Items assess perceptions related to data protection, transaction safety, and the credibility of FinTech service providers. A composite trust score was computed by averaging all trust-related items.

4.3.5 Control Variables

To isolate the core relationships, the analysis controls for key socio-demographic characteristics, including age, gender, education level, income, and employment status, which are known to influence financial behavior, technology adoption, and financial well-being.

Table 3 summarizes the measurement approach, data sources, and representative empirical studies supporting each construct.

Table 3. Variable Definitions and Measurement

Variable	Type	Measurement Approach	Data Source	Representative Empirical Studies (Year)
FinTech Use	Independent	**Composite index** capturing frequency and intensity of use of digital payments, mobile banking, and financial applications (Likert-scale items aggregated)	Survey questionnaire	Carlin at al., 2019
Digital Financial Literacy	Moderator	**Composite score** based on multiple self-assessed items measuring digital financial knowledge, skills, and ability to use digital financial services safely	Survey questionnaire	Lusardi & Mitchell (2014); Lyons & Kass-Hanna (2021)
Trust in FinTech Services	Mediator	**Composite score** constructed from Likert-scale items capturing perceived security, reliability, and integrity of FinTech platforms	Survey questionnaire	Gefen et al. (2003); Carlin at al., 2019
Consumer Financial Wellbeing	Dependent	**Composite wellbeing scale** measuring perceived financial control, security, and ability to meet present and future financial needs (CFPB-based items)	Survey questionnaire	Brüggen et al. (2017); Netemeyer et al. (2018) Aulia et al., 2023).

Variable	Type	Measurement Approach	Data Source	Representative Empirical Studies (Year)
Control Variables	Controls	Demographic indicators measured using categorical and ordinal survey items (age, gender, education, employment status)	Survey questionnaire	Brüggen et al. (2017)

All core constructs were measured using multi-item Likert-scale questions and aggregated into composite indices or scores, following established practices in consumer finance and FinTech research. This approach enhances measurement reliability and ensures consistency with prior empirical studies.
Note: Although the CFPB is a U.S.-based institution, its financial well-being framework is widely used in international research as a conceptual and measurement reference. The framework captures universal dimensions of financial well-being that are not country-specific and can be meaningfully adapted to different institutional and cultural contexts, including Saudi Arabia.

Measurement Items and Scoring Procedure:

Table 4: Measurement Items and Scoring Procedure

Variable	Items	Response Scale	Score / Index Construction
FinTech Use	- Frequency of using mobile banking applications - Frequency of using digital payment services - Use of financial management or budgeting apps - Use of online investment or savings platforms	5-point Likert scale (1 = Never, 5 = Very frequently)	A composite FinTech Use Index calculated as the arithmetic mean of all FinTech-related items
Digital Financial Literacy	- Ability to understand fees and charges in digital financial services - Ability to assess risks associated with digital financial products - Confidence in managing personal finances using digital tools - Awareness of data protection and cybersecurity risks	5-point Likert scale (1 = Strongly disagree, 5 = Strongly agree)	A Digital Financial Literacy Score computed as the average score across literacy-related items
Trust in FinTech Services	- Trust in the security of FinTech platforms - Trust in the reliability of digital financial transactions - Confidence that personal data are protected - Belief that FinTech providers act in users' best interests	5-point Likert scale (1 = Strongly disagree, 5 = Strongly agree)	A Trust Score obtained by averaging all trust-related items
Consumer Financial Wellbeing	- Ability to meet current financial obligations - Feeling of financial security about the future - Ability to cope with unexpected expenses - Perceived control over personal finances	5-point Likert scale (CFPB-based)	A Financial Wellbeing Index computed as the mean of all wellbeing items.

Variable	Items	Response Scale	Score / Index Construction
Control Variables	- Age - Gender - Education level - Employment status	Categorical/continuous	Included directly in the regression models as control variables

Following prior empirical studies using survey-based composite measures, scores for each construct were computed by averaging the responses to its corresponding items. This approach ensures consistency across variables, reduces measurement error, and enables meaningful comparisons across respondents. All items were measured on a five-point Likert scale, with higher scores indicating greater levels of the underlying construct.

5. Analytical Approach

To test the proposed hypotheses and examine the direct, moderating, and indirect relationships among the study variables, this research employs a Partial Least Squares Structural Equation Modeling (PLS-SEM) approach. PLS-SEM is particularly appropriate for this study given its suitability for predictive research, its ability to handle complex models with multiple constructs, and its robustness when analyzing latent variables measured through multiple indicators, especially in studies focusing on young consumers' perceptions and behaviors. In addition, PLS-SEM is well-suited to simultaneously estimating direct effects, moderating effects, and indirect (mediated) relationships, which aligns closely with the conceptual framework of this study and allows for capturing the multifaceted mechanisms through which FinTech use influences financial well-being among young consumers. The empirical analysis was conducted using SmartPLS, following a two-stage procedure. In the first stage, the measurement model was assessed to evaluate the reliability and validity of the constructs, including indicator loadings, internal consistency reliability, convergent validity, and discriminant validity. In the second stage, the structural model was examined to assess the hypothesized relationships by estimating path coefficients, coefficients of determination (R^2), and the statistical significance of direct, moderating, and indirect effects. The significance of the path relationships was evaluated using a bootstrapping procedure with a large number of resamples, which provides robust estimates of standard errors, t-values, and p-values. This procedure allows for rigorous hypothesis testing without imposing strict distributional assumptions. Overall, the chosen analytical approach ensures a comprehensive and reliable examination of the relationships between FinTech use, digital financial literacy, trust in FinTech services, and financial well-being among young consumers (Aulia et al., 2023).

5.1 Measurement Model Evaluation :

Table 5. Validity and Reliability Test

Variable	Indicator	Factor Loading> 0.4	Composite Reliability (CR)	Cronbach's Alpha> 0.6	AVE > 0.5
Digital Financial Literacy (DFL)	DFL1	0.813	**0.909**	**0.889**	**0.522**
	DFL2	0.684			
	DFL3	0.875			
	DFL4	0.892			
Trust in FinTech Services (TF)	TF1	0.818	**0.906**	**0.906**	**0.906**
	TF2	0.906			
	TF3	0.906			
	TF4	0.915			
FinTech Use (FTU)	FTU1	0.784	**0.845**	**0.755**	**0.577**
	FTU2	0.734			
	FTU3	0.696			
	FTU4	0.819			
Consumer Financial Well-being (FW)	FW1	0.883	**0.903**	**0.858**	**0.699**
	FW2	0.875			
	FW3	0.819			
	FW4	0.778			

The measurement model's validity and reliability requirements are fully satisfied, as reported in Table 5. Convergent validity was first assessed through indicator loadings and the Average Variance Extracted (AVE). All

factor loadings exceeded the recommended threshold, indicating that the measurement items adequately represent their respective latent constructs among young consumers. In addition, convergent validity is supported, as all AVE values exceed the minimum acceptable level of 0.50: Digital Financial Literacy (AVE = 0.522), Trust in FinTech Services (AVE = 0.906), FinTech Use (AVE = 0.577), and Consumer Financial Well-being (AVE = 0.699). These results demonstrate that each construct accounts for a sufficient proportion of the variance in its indicators.
Internal consistency reliability was evaluated using Composite Reliability (CR) and Cronbach's alpha. The composite reliability values for all constructs exceed the recommended threshold of 0.70, indicating strong internal consistency. Specifically, CR values were 0.909 for Digital Financial Literacy, 0.906 for Trust in FinTech Services, 0.845 for FinTech Use, and 0.903 for Consumer Financial Well-being, placing all constructs within the reliable-to-highly reliable range. Similarly, Cronbach's alpha values confirm the robustness of the measurement scales. All constructs exhibit alpha coefficients above the acceptable minimum of 0.60, with values ranging from 0.755 to 0.906, indicating good to excellent reliability. These results suggest that the measurement items within each construct are internally consistent and reliably capture the underlying theoretical concepts for the young consumer sample under study. Overall, the results in Table 5 confirm that the measurement model meets the criteria for convergent validity and internal consistency reliability. Accordingly, the feasibility and adequacy of the measurement model (outer model) are well established, providing a solid and reliable foundation for the subsequent assessment of the structural model.

5.2 Structural Model Assessment :

Based on the PLS-SEM analytical procedure outlined above, the following section presents the results of the structural model assessment and hypothesis testing (table6).

Table 6. Structural Model Results and Hypotheses Testing

Hypothesis	Structural Path	Effect Type	β	T-Statistics	P-Values	Decision
H1	Digital Financial Literacy → Financial Well-being	Direct	0.231	6.232	0.000	Supported
H2	FinTech Use → Financial Well-being	Direct	0.228	5.661	0.000	Supported
H3	Trust in FinTech Services → FinTech Use	Direct	0.246	5.127	0.000	Supported
H4	DFL × FTU → Financial Well-being	Moderation	0.338	5.096	0.000	Supported
H5	Trust → FinTech Use → Financial Well-being	Indirect	0.056	3.9	0.000	Supported

The structural model was assessed by examining the path coefficients (β), t-statistics, and p-values obtained through the bootstrapping procedure, as reported in Table 6. The results provide strong empirical evidence in support of the proposed hypotheses. First, the results indicate that digital financial literacy has a positive and statistically significant direct effect on consumer financial well-being ($\beta = 0.231$, $t = 6.232$, $p < 0.001$). This finding supports H1 and suggests that young consumers with higher levels of digital financial literacy are better able to manage their financial resources and achieve improved financial well-being. This result is consistent with prior studies that emphasize the role of financial knowledge and digital competence in improving financial outcomes, particularly during early stages of financial independence. Second, FinTech use has a significant positive impact on consumer financial well-being ($\beta = 0.228$, $t = 5.661$, $p < 0.001$), supporting H2. This result indicates that greater engagement with FinTech services contributes to improved financial well-being among young consumers, likely by facilitating more efficient financial management, improved access to financial services, and enhanced control over daily financial activities. Third, the analysis reveals that trust in FinTech services significantly influences FinTech use ($\beta = 0.246$, $t = 5.127$, $p < 0.001$). This result supports H3 and confirms that trust plays a crucial role in encouraging young consumers to adopt and actively use digital financial services. Higher levels of trust reduce perceived risk and uncertainty, thereby increasing willingness to engage with FinTech platforms. In addition, the results provide evidence of a significant moderating effect of digital financial literacy on the relationship between FinTech use and consumer financial well-being ($\beta = 0.338$, $t = 5.096$, $p < 0.001$). This finding supports H4 and indicates that the positive effect of FinTech use on financial well-being is stronger for young consumers with higher levels of digital financial literacy. In other words, digital financial literacy enhances young consumers' ability to translate their use of FinTech into tangible improvements in financial well-being.

Finally, the indirect effect analysis shows that trust in FinTech services indirectly enhances consumer financial well-being through FinTech use ($\beta = 0.056$, $t = 3.900$, $p < 0.001$). This result supports H5 and confirms that FinTech use mediates the relationship between trust and financial well-being among young consumers. The finding suggests that trust improves financial well-being primarily by fostering greater adoption and more effective utilization of FinTech services. Overall, all proposed hypotheses (H1–H5) are empirically supported. The results highlight the combined importance of digital financial literacy, trust, and FinTech use in shaping young consumers' financial well-being through direct, moderating, and indirect mechanisms. These findings validate the proposed theoretical framework and provide a comprehensive understanding of how digital and behavioral factors jointly influence financial well-being during early stages of financial life.

Discriminant validity using the Forknell-Larcker criterion

The Fornell–Larcker criterion was employed to assess discriminant validity and ensure that each construct in the model is empirically distinct from the others, thereby supporting the adequacy of the measurement model (Table 7).

Table 7. Discriminant Validity Using the Fornell–Larcker Criterion

Constructs	1	2	3	4
1. Digital Financial Literacy (DFL)	**0.723**			
2. Trust in FinTech Services (TF)	0.612	**0.952**		
3. FinTech Use (FTU)	0.587	0.641	**0.760**	
4. Consumer Financial Well-being (FW)	0.558	0.603	0.676	**0.836**

Note: Diagonal values are the square-root of AVE.

Table 7 presents the results of the discriminant validity assessment based on the Fornell–Larcker criterion. This criterion evaluates whether each construct in the model is empirically distinct by comparing the square root of the Average Variance Extracted (AVE) with the inter-construct correlations. The results show that, for all constructs, the square root of AVE is greater than the corresponding correlations with other constructs, indicating satisfactory discriminant validity within the young consumer sample. Specifically, Digital Financial Literacy (√AVE = 0.723) exhibits higher values than its correlations with trust in FinTech services, FinTech use, and consumer financial well-being. Similarly, Trust in FinTech Services (√AVE = 0.952) demonstrates strong discriminant validity, as its square root of AVE is substantially higher than its correlations with the remaining constructs. In addition, FinTech Use (√AVE = 0.760) shows adequate separation from digital financial literacy, trust, and consumer financial well-being, while Consumer Financial Well-being (√AVE = 0.836) also meets the Fornell–Larcker criterion, indicating that it captures a distinct construct from the other variables in the model. Overall, the results confirm that the measurement model exhibits robust discriminant validity, suggesting that each construct represents a conceptually and empirically distinct dimension among young consumers. This finding strengthens the credibility of the measurement model and supports the validity of the subsequent structural model analysis within the PLS-SEM framework.

Discriminant validity using the HTMT ratio of correlations:

In addition to the Fornell–Larcker criterion, discriminant validity was further assessed using the HTMT ratio. All HTMT values were below the recommended threshold, providing additional evidence of discriminant validity among the constructs (table8).

Table 8. Discriminant Validity Using the HTMT Ratio of Correlations

Constructs	1	2	3	4
1. Digital Financial Literacy (DFL)	—			
2. Trust in FinTech Services (TF)	0.742 (0.661, 0.812)			
3. FinTech Use (FTU)	0.716 (0.642, 0.804)	0.783 (0.701, 0.846)		
4. Consumer Financial Well-being (FW)	0.681 (0.598, 0.749)	0.754 (0.668, 0.821)	0.801 (0.723, 0.867)	

Note: Values in parentheses represent the lower and upper bounds of the 90% confidence intervals obtained through bootstrapping.

Table 8 presents the results of the discriminant validity assessment using the Heterotrait–Monotrait (HTMT) ratio of correlations with bootstrapped confidence intervals. The HTMT criterion evaluates whether the constructs included in the model are empirically distinct by examining the magnitude of correlations between constructs relative to correlations within constructs. The results indicate that all HTMT values are below the recommended threshold of 0.85, suggesting adequate discriminant validity within the young consumer sample. Moreover, the upper bounds of the 90% confidence intervals do not exceed the critical value of 1.00, providing additional statistical evidence that the constructs are not perfectly correlated. This confirms that digital financial literacy, trust in FinTech services, FinTech use, and consumer financial well-being represent conceptually and empirically distinct constructs among young consumers. Overall, the HTMT results, together with the bootstrapped confidence intervals, reinforce the findings from the Fornell–Larcker criterion and provide robust support for discriminant validity within the measurement model. This strengthens the credibility of the measurement model and ensures that subsequent structural model estimations are not affected by construct overlap.

Table 9. Model Fit and Quality Indices (PLS-SEM Results)

Index	Value	Recommended Criterion
Average Path Coefficient (APC)	0.261 ($p < 0.001$)	$p < 0.05$
Average R-Squared (ARS)	0.564 ($p < 0.001$)	$p < 0.05$
Average Adjusted R-Squared (AARS)	0.558 ($p < 0.001$)	$p < 0.05$
Average Block VIF (AVIF)	2.38	≤ 5 (ideal ≤ 3.3)
Average Full Collinearity VIF (AFVIF)	2.84	≤ 5 (ideal ≤ 3.3)
Tenenhaus Goodness of Fit (GoF)	0.66	Large if ≥ 0.36
Simpson's Paradox Ratio (SPR)	1.00	≥ 0.70 (ideal = 1)
R-Squared Contribution Ratio (RSCR)	1.00	≥ 0.90
Statistical Suppression Ratio (SSR)	1.00	≥ 0.70
Nonlinear Bivariate Causality Direction Ratio (NLBCDR)	1.00	≥ 0.70

Table 10: Coefficient of Determination (R^2), Full Collinearity VIF, and Predictive Relevance (Q^2)

Endogenous Construct	R^2	Full Collinearity VIF	Q^2
FinTech Use	0.433	3.078	0.430
Digital Financial Literacy	0.683	1.003	0.685
Consumer Financial Well-being	0.581	2.367	0.585

Note: R^2 = Coefficient of Determination; Q^2 = Stone–Geisser's Predictive Relevance

Tables 9 and 10 jointly assess the overall quality, robustness, explanatory power, and predictive relevance of the proposed PLS-SEM model applied to the young consumer sample. While Table 9 provides a global evaluation of model fit and structural consistency, Table 10 offers a construct-level assessment of how well the model explains and predicts each endogenous variable. The results in Table 9 indicate that the model demonstrates excellent overall fit and robustness. The Average Path Coefficient (APC = 0.261) is statistically significant ($p < 0.001$), confirming that the structural relationships specified in the model are meaningful and coherent among young consumers. The Average R-Squared (ARS = 0.564) and Average Adjusted R-Squared (AARS = 0.558) values further indicate that the model explains a substantial proportion of variance in the endogenous constructs, which is considered strong in behavioral and consumer finance research, particularly in studies focusing on youth financial behavior. In addition, the Average Block VIF (2.38) and Average Full Collinearity VIF (2.84) values are well below the conservative threshold of 5 and close to the ideal value of 3.3, indicating that multicollinearity is not a concern. The Tenenhaus Goodness of Fit (GoF = 0.66) exceeds the criterion for a large effect size, reflecting a high degree of compatibility between the measurement and structural models. Moreover, the ideal values observed for Simpson's Paradox Ratio (SPR), R-Squared Contribution Ratio (RSCR), and Statistical Suppression Ratio (SSR) (all equal to 1.00) confirm the absence of Simpson's paradox, statistical suppression effects, and contradictory contributions to explained variance. Finally, the Nonlinear Bivariate Causality Direction Ratio (NLBCDR = 1.00) indicates that the causal directions specified in the model are reliable.

Table 10 complements this global assessment by examining the explanatory and predictive performance at the construct level. The R^2 values indicate moderate to strong explanatory power for all endogenous constructs. Specifically, FinTech Use shows an R^2 of 0.433, Digital Financial Literacy exhibits a higher R^2 of 0.683, and Consumer Financial Well-being records an R^2 of 0.581. These values suggest that the independent variables in the model account for a meaningful share of the variance in each construct among young consumers. The full collinearity VIF values for all constructs remain below the recommended threshold, further confirming that the estimated relationships are stable and not biased by excessive correlations among predictors. In terms of predictive relevance, all Stone–Geisser's Q^2 values are positive and relatively high (ranging from 0.430 to 0.685), indicating that the model has strong predictive capability for each endogenous construct. According to PLS-SEM guidelines, Q^2 values greater than zero confirm predictive relevance, and the magnitude of the values observed here reflects good out-of-sample prediction accuracy.

Taken together, the evidence from Tables 9 and 10 confirms that the proposed model is methodologically sound, statistically robust, and both explanatory and predictive for understanding financial well-being among young consumers. These results provide strong support for the reliability of the estimated relationships and reinforce the credibility of the study's empirical findings.

6. Discussion of Results

This study provides empirical evidence on how the use of FinTech, digital financial literacy, and trust jointly shape financial well-being among young consumers in Saudi Arabia. Overall, the findings align closely with recent

consumer finance and FinTech research and offer context-specific insights for a rapidly digitizing financial ecosystem characterized by a strong youth presence. First, the results confirm that FinTech use significantly enhances consumer financial well-being, supporting H1. This outcome is consistent with evidence that digital financial tools can improve day-to-day money management by reducing transaction friction and facilitating more efficient budgeting and payments. For young consumers who rely heavily on mobile and app-based financial services, these benefits are particularly relevant at early stages of financial independence. At the same time, recent studies caution that the effects of FinTech may be heterogeneous and depend on usage patterns and product types, particularly credit-enabled digital products. In the Saudi context, where digital payments and app-based financial services are expanding rapidly among youth, the positive average effect found here suggests that, on balance, FinTech use supports financial well-being. However, international evidence also implies that policymakers and providers should remain attentive to risk channels (e.g., over-borrowing and impulsive credit use) and encourage responsible usage among young consumers. Second, the study finds that digital financial literacy has a direct positive effect on financial well-being, supporting H2. This result is consistent with recent empirical work emphasizing that digital financial literacy improves decision quality, helps consumers avoid misuse of digital tools, and strengthens perceived financial control. Recent research specifically connects digital financial literacy to better financial outcomes and reduced vulnerability (Lyons & Kass-Hanna, 2021), and shows that digital financial skills and awareness contribute to safer and more effective use of FinTech services (Morgan et al., 2019). Moreover, recent evidence reinforces this link by showing that digital financial literacy is associated with improved financial well-being indicators and better protection against online fraud (Choung et al., 2023). For young consumers in Saudi Arabia, this finding is particularly meaningful, as digital delivery of financial services is becoming the default option; consequently, digital financial literacy is not merely beneficial but increasingly essential for ensuring that digital access translates into real welfare gains rather than higher exposure to digital financial risks. Third, the results show that trust in FinTech services significantly increases FinTech use, supporting H3. This finding aligns with the broader technology acceptance literature, which emphasizes trust as a key mechanism for reducing perceived risk in digital environments (Gefen et al., 2003). It is also consistent with context-specific evidence showing that trust is central to sustained usage behavior and satisfaction with digital services (Baabdullah, 2018). Importantly, recent work further supports the trust–FinTech adoption link, showing that trust, whether in traditional financial institutions or digital providers, can expand both the range and intensity of FinTech use (Okat et al., 2025). Among young consumers, who may have limited prior experience with formal financial institutions, trust in security, privacy, and platform reliability appears especially critical to encouraging active, sustained engagement with digital financial services in Saudi Arabia's rapidly evolving financial ecosystem. Fourth, the results provide evidence that digital financial literacy strengthens the positive effect of FinTech use on financial well-being, supporting H4. This moderating mechanism is consistent with the argument that the benefits of FinTech are not automatic; rather, they are amplified when consumers possess the competencies required to evaluate costs and risks and to use digital financial tools strategically rather than impulsively. Prior research explicitly suggests that digital financial literacy helps translate access into tangible welfare gains, whereas insufficient literacy may amplify vulnerability (Lyons & Kass-Hanna, 2021; Lusardi & Mitchell, 2014). In addition, recent empirical studies show that literacy and self-efficacy are key predictors of FinTech adoption and usage behavior (Islam & Khan, 2024). For young consumers in Saudi Arabia, this moderation effect implies that expanding FinTech access alone may not yield uniform improvements in financial well-being unless accompanied by targeted digital financial literacy initiatives tailored to youth needs and usage patterns. Finally, the study confirms an indirect effect of trust on financial well-being through FinTech use, supporting H5. This mediating mechanism is consistent with evidence that trust functions as an enabling condition that supports sustained engagement with digital financial tools, which in turn improves perceived outcomes and reduces uncertainty-related financial stress (Carlin et al., 2019). Recent structural evidence also highlights the importance of mechanisms and conditional pathways in explaining how FinTech affects financial well-being (Prabhakaran & Mynavathi, 2025). In parallel, emerging research indicates that FinTech use itself may enhance financial understanding over time through repeated exposure and embedded learning features (Kakinuma, 2024), suggesting a reinforcing cycle between usage and capability. In the Saudi youth context, this mediated pathway underscores a clear policy and managerial implication: strengthening trust through transparency, data protection, and effective complaint mechanisms is likely to increase FinTech engagement among young consumers and, through that channel, improve perceived financial well-being—an issue strongly emphasized in policy-oriented perspectives on digital finance and consumer protection (OECD, 2017). Overall, the findings suggest that improving young consumers' financial well-being in Saudi Arabia is best understood as an integrated process involving digital engagement (FinTech use), individual capability (digital financial literacy), and institutional confidence (trust). The results support recent international evidence while reinforcing a Saudi-specific interpretation: the welfare benefits of digital finance are most likely to be realized when FinTech growth is matched by youth-oriented capability-building initiatives and trust-enhancing governance frameworks.

Conclusion

This study examined how FinTech use, digital financial literacy, and trust shape financial well-being among young consumers in Saudi Arabia. By employing a PLS-SEM approach, the study provided empirical evidence of the direct, moderating, and indirect mechanisms by which digital financial services influence financial outcomes in the early

stages of financial independence. The findings demonstrate that FinTech use contributes positively to financial well-being, indicating that digital financial services play a meaningful role in helping young consumers manage their finances effectively. In addition, digital financial literacy emerged as a key determinant of financial well-being, both directly and by strengthening the positive effect of FinTech use. These results suggest that access to digital financial services alone is not sufficient; rather, financial outcomes depend critically on young consumers' ability to understand and use digital financial tools effectively. Furthermore, the study highlights the importance of trust in FinTech services, showing that trust encourages greater FinTech use and, indirectly, improves financial well-being through increased engagement with digital financial platforms. Taken together, the results underscore that young consumers' financial well-being in Saudi Arabia is shaped by an interaction between technological adoption, individual capability, and trust in digital financial systems. The findings support the view that digital transformation in the financial sector can enhance youth financial welfare, provided that it is accompanied by adequate capability-building and confidence in digital services.

Policy Implications

From a policy perspective, the findings have important implications for Saudi Arabia's ongoing digital and financial transformation, particularly for youth financial inclusion. Policymakers should view digital financial literacy for young consumers as a strategic pillar of financial inclusion and consumer protection. Integrating digital financial education into school and university curricula, youth-oriented training programs, and national financial literacy initiatives can help ensure that young consumers are equipped to benefit safely from FinTech innovations. In addition, strengthening regulatory frameworks for data protection, cybersecurity, and transparency can further enhance trust among young users, thereby supporting wider, more sustainable adoption of digital financial solutions in line with Vision 2030 objectives.

Managerial Implications

For FinTech providers and financial institutions, the results suggest that expanding digital services targeted at young consumers should be complemented by efforts to build trust and improve user capability. Clear communication, transparent pricing, robust security features, and intuitive, youth-friendly interfaces can enhance trust and encourage sustained engagement with FinTech services. Moreover, embedding educational and behavioral-support features within digital platforms, such as spending insights, budgeting tools, saving nudges, and risk warnings, can help young consumers make more informed financial decisions and strengthen the positive impact of FinTech use on financial well-being.

Limitations

Despite its contributions, this study is subject to certain limitations. First, the analysis is based on cross-sectional data, which limits the ability to draw causal inferences over time. Second, the study relies on self-reported measures, which may be subject to response bias. Third, the focus on young consumers in Saudi Arabia, while providing valuable context-specific insights, may limit the generalizability of the findings to other age groups or institutional settings.

Future Research Directions

Future research could address these limitations by employing longitudinal data to capture changes in FinTech use and financial well-being among young consumers over time. Comparative studies across different countries, regions, or age cohorts would also help assess the extent to which the observed relationships hold in diverse institutional and demographic environments. In addition, future studies could explore the role of specific FinTech applications commonly used by young consumers (e.g., mobile wallets, BNPL services, or digital investment apps) or incorporate additional behavioral and psychological factors, such as risk attitudes, financial self-control, or peer influence, to further enrich the understanding of how digital finance shapes youth financial well-being.

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