

FinTech and Financial Well-Being Among Malaysian Young Adults: Direct or Moderating Role?

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ABSTRACT

This study examines the relationships among financial behaviour, FinTech adoption, and financial well-being among Malaysian young adults, with particular attention to whether FinTech moderates the relationship between financial behaviour and financial well-being. Employing a quantitative cross-sectional survey design, data were analysed from 289 undergraduate students across public and private tertiary institutions in Malaysia. Partial Least Squares Structural Equation Modelling (PLS-SEM) was used for analysis. The results show that FinTech has a statistically significant positive association with financial well-being ($\beta = 0.029$, $p = 0.024$), whereas financial behaviour is not significantly associated with either financial well-being or FinTech adoption. The moderating effect of FinTech on the financial behaviour–financial well-being relationship is also not significant. Higher-order construct analysis identifies credit management and perceived usefulness and efficiency as prominent dimensions of financial behaviour and FinTech, respectively. These findings suggest that, within this sample, FinTech is associated with financial well-being independently of the hypothesised direct and moderating effects of financial behaviour.

Keywords: Budgeting Behaviour; FinTech; Financial Literacy; Financial Goals; Malaysian Youth

INTRODUCTION

Financial vulnerability among Malaysian youth has become an increasing concern, particularly in the context of rising indebtedness and changing patterns of consumer credit use. Between 2020 and early 2025, 5,272 individuals under the age of 34 were declared bankrupt, including 877 cases in 2024, representing an increase of 150 cases from the previous year (Business Today Editorial, 2025). Personal loans were reported as the leading cause of bankruptcy in 2024, accounting for 2,776 cases (46.4%), followed by business loans, housing loans, vehicle hire-purchase loans, and other financial obligations (Business Today Editorial, 2025).

Financial pressures among young adults have also emerged alongside the rapid expansion of alternative forms of consumer credit, particularly buy-now-pay-later (BNPL) services. Malaysia's household debt stood at RM1.63 trillion at the end of 2024, equivalent to approximately 84.2% of GDP (Bernama, 2025). At the same time, the increasing use of BNPL services has raised concerns regarding spending behaviour and debt management among younger consumers. The convenience, accessibility, and relatively frictionless nature of BNPL transactions may provide short-term flexibility but may also encourage impulsive purchasing and debt accumulation when not accompanied by responsible financial management (Abdul Halim et al., 2024). These developments illustrate the increasingly complex financial environment in which Malaysian young adults make financial decisions. At the same time, financial technology (FinTech) has transformed how young adults

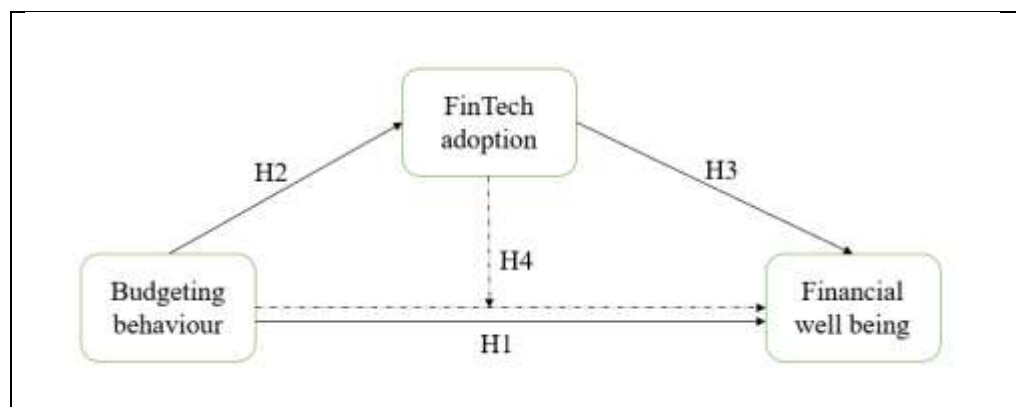
access and manage financial services. Digital financial tools such as e-wallets, mobile banking applications, digital payment platforms, and automated savings services provide users with greater convenience and access to real-time financial information. Such technologies may support financial management by enabling individuals to monitor expenditure, organise transactions, establish savings goals, and make more informed financial decisions. Nevertheless, greater access to digital financial services does not necessarily translate into improved financial behaviour or financial well-being. Previous studies indicate that the relationship between FinTech usage and effective financial management remains complex and may depend on users' financial capabilities and patterns of technology use (Menberu, 2024; Zhang & Fan, 2024).

This complexity reflects the dual role of FinTech in personal financial management. On the one hand, digital financial tools may support responsible financial behaviour through features such as automated savings, expenditure tracking, transaction notifications, and financial planning functions. These features can provide timely information that helps users monitor their finances and maintain greater financial control (Low et al., 2023). On the other hand, the increasing accessibility of digital credit and BNPL services may reduce transaction friction and potentially encourage impulsive consumption, particularly among younger consumers with limited financial planning experience (Abdul Halim et al., 2024). FinTech may therefore facilitate financial management while simultaneously creating new behavioural challenges, depending on how digital financial services are adopted and used. Despite growing research on financial behaviour, FinTech adoption, and financial well-being, important questions remain regarding how these factors operate together among Malaysian young adults. Existing studies have generally examined the direct relationships between financial behaviour and financial well-being or between FinTech usage and financial outcomes. However, comparatively less attention has been given to whether financial behaviour is associated with FinTech adoption and, more importantly, whether FinTech changes the strength of the relationship between financial behaviour and financial well-being. Examining this moderating role is important because digital financial technologies may either facilitate the translation of responsible financial behaviour into improved financial outcomes or weaken this relationship when digital services encourage convenience-driven consumption and borrowing.

Accordingly, this study investigates the relationships among financial behaviour, FinTech adoption, and financial well-being among Malaysian young adults. Specifically, it examines whether financial behaviour is associated with financial well-being, whether financial behaviour is associated with FinTech adoption, whether FinTech adoption is associated with financial well-being, and whether FinTech adoption moderates the relationship between financial behaviour and financial well-being. By examining these relationships within an integrated framework, the study seeks to contribute to the literature on personal financial management and digital financial services while providing insights relevant to educational institutions, policymakers, financial institutions, and FinTech providers seeking to support the financial well-being of young adults.

REVIEW OF LITERATURE

Figure 1. The conceptual framework



Source: Developed by the authors based on literature

Financial Wellbeing

Financial well-being (FWB) is a multidimensional concept that reflects an individual's ability to meet current financial obligations, maintain control over financial resources, cope with unexpected financial circumstances, and feel secure about future financial conditions. The Consumer Financial Protection Bureau (CFPB, 2017) defines financial well-being as a state in which individuals can meet their current and ongoing financial obligations, feel secure about their financial future, and make financial choices that allow them to enjoy life. This perspective indicates that financial well-being extends beyond objective financial indicators such as income, savings, and wealth, as it also encompasses individuals' perceptions of financial security, control, and freedom of choice.

Similarly, Brügggen et al. (2017) conceptualise financial well-being as an individual's perception of being able to maintain current and anticipated desired living standards and financial freedom. This definition highlights the subjective nature of financial well-being and suggests that individuals with similar levels of financial resources may experience different levels of financial well-being depending on their financial obligations, expectations, behaviours, and perceived financial security. Accordingly, financial well-being should not be assessed solely on the basis of the amount of financial resources an individual possesses.

Financial well-being is particularly relevant among young adults because this stage of life often involves increasing financial responsibilities and the gradual development of independent financial decision-making. Young adults may need to manage educational expenses, living costs, savings, debt, and other financial commitments while having relatively limited financial resources. Consequently, their financial well-being may depend not only on their financial circumstances but also on their ability to manage available resources effectively. Understanding financial well-being among young adults is therefore important for identifying the financial and behavioural factors associated with their perceived financial security and control.

Financial Behaviour

Financial behaviour refers to the actions and practices individuals undertake in managing their financial resources, including budgeting, saving, spending, and credit management. It reflects how individuals translate their financial knowledge, attitudes, and intentions into actual financial decisions and practices. Responsible financial behaviour is important because the manner in which individuals manage available resources may influence their ability to meet financial obligations, prepare for future needs, and maintain financial stability.

Dew and Xiao (2011) conceptualised financial management behaviour through several dimensions, including cash management, credit management, saving and investment, and other financial practices. Similarly, Hilgert et al. (2003) highlighted the importance of financial management practices such as budgeting, saving, and credit management in household financial decision-making. These behaviours represent practical aspects of personal financial management and may contribute to individuals' ability to exercise greater control over their financial circumstances.

Among young adults, responsible financial behaviour is particularly important because this stage of life often involves the development of independent financial habits and increasing responsibility for financial decisions. Budgeting enables individuals to allocate available resources according to their needs and priorities, while saving provides financial reserves for future goals and unexpected expenses. Effective credit management may help individuals meet repayment obligations and avoid excessive indebtedness. In contrast, compulsive or uncontrolled purchasing may place additional pressure on limited financial resources and potentially undermine financial well-being.

Previous studies have demonstrated an association between financial behaviour and financial well-being. Sabri et al. (2022), for example, found that financial behaviour was significantly associated with perceived financial well-being among low-income young adults in Malaysia. Their findings indicate that responsible financial practices may play an important role in shaping how young adults perceive and manage their financial circumstances. Other research involving Malaysian young adults has similarly highlighted the importance of financial behaviour in explaining variations in financial well-being.

Taken together, the literature suggests that individuals who practise responsible financial behaviours, such as budgeting, saving, effective credit management, and controlled spending, may experience greater financial control and security. These behaviours can assist individuals in managing available resources, meeting financial commitments, and preparing for future financial needs. Accordingly, this study proposes the following hypothesis:

H1: Financial behaviour is positively associated with financial well-being among Malaysian young adults.

Financial Technology (FinTech)

The adoption of financial technology (FinTech) is influenced by multiple technological, behavioural, and contextual factors. The Unified Theory of Acceptance and Use of Technology (UTAUT) provides a widely applied theoretical framework for explaining individuals' acceptance and use of technology. The model proposes that performance expectancy, effort expectancy, social influence, and facilitating conditions influence behavioural intention and technology-use behaviour (Taiwo & Downe, 2013). An extended version, UTAUT2, incorporates additional factors such as hedonic motivation, price value, and habit to provide a broader explanation of consumer technology adoption (Venkatesh et al., 2012).

Previous studies have applied UTAUT and related technology-adoption frameworks to explain FinTech adoption across different contexts. Performance expectancy, effort expectancy, facilitating conditions, social influence, and trust have been identified as relevant determinants of users' intention to adopt FinTech, although the significance of individual determinants may vary across populations and technological contexts (Amnas et al., 2023; Khatun & Tamanna, 2020; Sultana et al., 2023). For instance, while some studies report a significant role for social influence, others find that its effect is less consistent (Ojiaku et al., 2024; Sultana et al., 2023). Contextual factors may also influence perceived ease of use and perceived usefulness, which subsequently shape individuals' intention to use financial technologies (Wismantoro & Susilowati, 2021).

The applicability of UTAUT to the Malaysian FinTech environment is particularly relevant to the present study. Tajul Urus et al. (2022), for example, examined FinTech payment adoption among Malaysian fresh graduates and highlighted the importance of performance expectancy and trust in explaining behavioural intention. Similarly, Ahmad Nazmi et al. (2024) examined robo-advisor adoption among Malaysia's B40 population and demonstrated the importance of technology-related perceptions in explaining adoption intention. These findings indicate that the acceptance of FinTech is influenced not merely by access to technology but also by users' perceptions of its usefulness, ease of use, facilitating conditions, and trustworthiness.

In the context of personal financial management, FinTech provides various tools that may assist individuals in conducting transactions, monitoring expenditure, managing savings, making payments, and accessing financial information. Consequently, individuals who actively manage their finances may perceive greater value in digital financial tools that facilitate these activities. Financial behaviour, which encompasses practices such as budgeting, saving, credit management, and spending control, may therefore be relevant to understanding individuals' engagement with FinTech.

Previous research provides some evidence of an association between financial behaviour and the use of financial technology, although the direction and nature of this relationship vary across studies. Alkhawaldeh et al. (2023), in the context of Jordanian micro, small, and medium enterprises, examined financial behaviour in relation to financial literacy and FinTech usage. Their findings indicate that financial behaviour plays an important role in the relationship between financial capability and engagement with financial technology. However, as the study was conducted among MSMEs, its findings should be applied cautiously when explaining FinTech engagement among Malaysian young adults.

Evidence from Malaysia also indicates that financial behaviour and financial technology are interconnected in explaining financial outcomes among young adults. Research by Sabri et al. (2022) has examined financial technology alongside financial behaviour and financial well-being among Malaysian young adults.

Nevertheless, such findings should not be interpreted as establishing that responsible financial behaviour necessarily causes FinTech adoption. Instead, they provide a basis for further examining the relationship between financial-management practices and engagement with digital financial services.

Similarly, Gafoor and Amilan (2024) examined the relationship between FinTech use, financial behaviour, and financial well-being among persons with disabilities. Their findings further demonstrate that financial behaviour may play an important role in determining how individuals derive financial benefits from technology. However, this evidence primarily concerns the role of financial behaviour in the relationship between FinTech and financial well-being rather than directly establishing financial behaviour as a determinant of FinTech adoption.

Taken together, the literature suggests a plausible relationship between financial behaviour and FinTech engagement. Individuals who actively budget, save, monitor expenditure, and manage credit may perceive digital financial tools as useful for implementing and monitoring these financial practices. At the same time, existing evidence does not establish that responsible financial behaviour will necessarily lead to greater FinTech adoption, particularly among Malaysian young adults. This relationship therefore warrants further empirical investigation. Accordingly, the following hypothesis is proposed:

H2: Financial behaviour is positively associated with FinTech adoption and utilisation among Malaysian young adults.

FinTech and Financial Well-Being

The convergence of technology and financial services, commonly referred to as financial technology (FinTech), has transformed the way individuals' access and manage their finances. Digital financial services, including mobile banking, mobile payments, money-management applications, and other technology-enabled financial tools, provide users with greater accessibility and convenience in conducting financial activities. As the use of these technologies expands, increasing scholarly attention has been directed towards understanding whether FinTech is associated with broader financial outcomes, particularly financial well-being.

Previous research provides evidence that the use of FinTech may be associated with financial well-being, although findings are not entirely consistent across different populations and contexts. Zhang and Fan (2024), for example, examined the antecedents and outcomes of mobile FinTech use, including mobile banking, mobile payments, mobile transfers, and mobile financial-management tools. Their findings demonstrated significant direct and indirect relationships among financial education, financial literacy, mobile FinTech use, desirable financial behaviours, and financial well-being. These findings suggest that mobile FinTech may contribute to financial well-being both directly and through its relationship with responsible financial behaviour.

Balatif et al. (2024) further examined the role of financial technology in the relationships among financial education, financial stress, and financial well-being among Millennials in East Medan, Indonesia. Their study considered the use of financial technology as a mechanism through which financial education and financial stress may be associated with financial well-being. This provides further evidence that FinTech may play an important role within a broader set of factors influencing individuals' financial outcomes.

More recent evidence from Indonesia also indicates a positive relationship between FinTech and well-being. Munna et al. (2025), in a study involving employees of PDAM Jepara, reported that financial technology had a positive and significant relationship with employee well-being. Their study also examined the mediating roles of financial literacy and lifestyle, demonstrating that the relationship between financial technology and well-being may operate alongside other individual and behavioural factors. However, because the study focused on employees within a specific organisational setting, its findings may not be directly generalisable to Malaysian young adults.

Nevertheless, empirical findings concerning the relationship between FinTech and financial well-being are not universally consistent. Shankar et al. (2022), for example, investigated financial well-being among

Generation Z university students in India and examined financial literacy, financial fragility, financial behaviour, and financial technology as potential determinants. Their findings showed that financial behaviour was positively associated with financial well-being, whereas financial technology did not have a statistically significant relationship with financial well-being. This finding suggests that access to or use of financial technology alone may not necessarily translate into improved financial well-being.

Theoretically, technology-adoption frameworks such as the Unified Theory of Acceptance and Use of Technology (UTAUT) provide a basis for understanding individuals' acceptance and use of digital technologies. UTAUT proposes that performance expectancy, effort expectancy, social influence, and facilitating conditions influence behavioural intention and technology-use behaviour (Venkatesh et al., 2003). In the FinTech context, individuals who perceive digital financial tools as useful, accessible, and relatively easy to use may be more willing to incorporate them into their financial activities. Once adopted, digital financial tools may facilitate activities such as monitoring transactions, tracking expenditure, managing payments, and accessing financial information.

However, FinTech should not be regarded as a universal solution to financial difficulties. Its potential contribution to financial well-being may depend on how individuals use the technology, their financial and digital capabilities, and the types of financial services accessed. Digital financial tools may facilitate financial management, but their availability alone does not guarantee responsible financial decisions or improved financial outcomes. The mixed findings in previous research therefore indicate a need for further investigation, particularly among Malaysian young adults. Given the potential of FinTech to facilitate financial management and the mixed empirical evidence regarding its relationship with financial well-being, this study examines whether FinTech is positively associated with financial well-being among Malaysian young adults. Accordingly, the following hypothesis is proposed:

H3: FinTech is positively associated with financial well-being among Malaysian young adults.

FinTech as the Moderator Between Financial Behaviour and Financial Well-Being

Financial behaviour plays an important role in individuals' financial well-being because practices such as budgeting, saving, spending control, and responsible credit management can influence how effectively individuals manage their financial resources. However, the relationship between financial behaviour and financial well-being may also depend on the financial environment and tools available to individuals. With the increasing use of digital financial services, FinTech may provide an important technological context through which individuals implement and monitor their financial behaviour.

FinTech provides users with various functions that may facilitate personal financial management, including real-time transaction monitoring, digital payments, expenditure tracking, savings management, and access to financial information. These functions may enable individuals with responsible financial behaviours to manage their finances more efficiently. For example, individuals who practise budgeting may use digital financial tools to monitor expenditure, while those who save regularly may use digital platforms to track progress towards their financial goals. From this perspective, FinTech may complement existing financial behaviour and potentially alter the strength of the relationship between financial behaviour and financial well-being.

Nevertheless, the role of FinTech in personal financial management is not necessarily beneficial in all circumstances. Greater accessibility to digital financial services may also increase exposure to digital credit and facilitate consumption. Yue et al. (2022) found that although digital finance can promote financial inclusion by expanding access to financial services and credit markets, easier access to credit may also increase household consumption and the risk of excessive debt accumulation. This suggests that the financial consequences of digital finance may depend partly on how individuals manage the opportunities and risks associated with digital financial services.

Empirical evidence from Malaysia provides a relevant basis for examining FinTech as a moderating factor. Mahdzan et al. (2023) examined digital financial services usage and subjective financial well-being among

low-income Malaysian households and specifically investigated whether the use of digital financial services moderates the relationships between financial behaviour, financial stress, and subjective financial well-being. Their study provides direct empirical justification for considering digital financial services as a contextual factor that may alter the relationship between financial behaviour and financial well-being.

Sabri et al. (2023) further examined the moderating role of FinTech app usage among 1,948 B40 households in Malaysia using a cross-sectional SEM-PLS approach. Their findings demonstrated that FinTech app usage played a moderating role in relationships involving individual financial characteristics and financial well-being. Although their model is not identical to the relationship examined in the present study, the findings provide additional evidence that FinTech usage may operate as a contextual factor rather than solely as a direct predictor of financial well-being.

Despite this emerging evidence, the moderating role of FinTech remains insufficiently understood among Malaysian young adults. Young adults increasingly use mobile banking, e-wallets, digital payment platforms, and other technology-enabled financial services, yet the availability and use of such technologies do not necessarily guarantee improved financial outcomes. It is therefore important to examine whether FinTech changes the strength of the relationship between responsible financial behaviour and financial well-being among this population. Accordingly, the following hypothesis is proposed:

H4: FinTech moderates the relationship between financial behaviour and financial well-being among Malaysian young adults

RESEARCH METHODOLOGY

This study employed a quantitative, cross-sectional survey design to examine the relationships among financial behaviour, financial technology (FinTech), and financial well-being among young adults in Malaysia. The unit of analysis comprised undergraduate students enrolled in public and private tertiary institutions in Malaysia. A convenience sampling technique was employed due to accessibility, time, and resource considerations. Respondents were recruited from several tertiary institutions, including Universiti Teknologi MARA (UiTM), Universiti Kebangsaan Malaysia (UKM), INTI International College, and Taylor's University. A total of 289 usable responses collected through an online self-administered questionnaire were included in the final analysis.

The data were analysed using Partial Least Squares Structural Equation Modelling (PLS-SEM). PLS-SEM was considered appropriate because the proposed model involves multiple structural relationships, hierarchical component models, and a moderating effect. The analysis was conducted in two main stages: assessment of the measurement model followed by assessment of the structural model.

The conceptual model was specified as a formative-formative hierarchical component model (HCM) comprising lower-order constructs (LOCs) and higher-order constructs (HOCs). Financial Behaviour was conceptualised as a higher-order construct comprising four lower-order dimensions: Saving, Budgeting, Credit Management, and Compulsive Buying. Saving was represented by four indicators (S1–S4). Financial Technology was represented by four lower-order dimensions: Perceived Ease of Use and Accessibility, Adoption and Willingness to Use, Perceived Usefulness and Efficiency, and Trust and Security. Financial Well-Being was represented by three lower-order dimensions: Being in Control, Comfort in Debt, and External Pressure.

At the lower-order level, the indicators were specified as forming their respective dimensions, while at the higher-order level, the lower-order dimensions were specified as forming their respective higher-order constructs. Accordingly, the formative measurement models were evaluated by examining collinearity and the significance and relevance of the outer weights. Collinearity was assessed using the variance inflation factor (VIF), with values below 5 considered indicative of the absence of critical collinearity (Hair et al., 2022). The statistical significance of the outer weights was evaluated using a bootstrapping procedure at the 5%

significance level. Convergent validity of the formative constructs was assessed using redundancy analysis, whereby each formative construct was related to a global measure representing the same underlying concept (Hair et al., 2022). The strength of the resulting relationship was examined to determine whether the formative measurement adequately captured the intended construct.

Following assessment of the measurement model, the structural model was evaluated to test the proposed hypotheses. Collinearity among the predictor constructs was first examined using inner VIF values. The magnitude and statistical significance of the structural path coefficients were subsequently assessed using bootstrapping. The model's explanatory power was evaluated using the coefficient of determination (R^2), while effect sizes (f^2) were examined to determine the contribution of individual predictor constructs to the endogenous constructs. The model's predictive performance was further evaluated using an appropriate out-of-sample predictive assessment procedure.

The structural model examined the direct relationship between Financial Behaviour and Financial Well-Being (H1), the relationship between Financial Behaviour and Financial Technology (H2), and the relationship between Financial Technology and Financial Well-Being (H3). In addition, an interaction term between Financial Behaviour and Financial Technology was incorporated to examine whether Financial Technology moderates the relationship between Financial Behaviour and Financial Well-Being (H4).

RESULTS AND DISCUSSION

Demographic Analysis

A total of 289 usable responses were included in the analysis. Descriptive statistics were used to summarise the demographic characteristics of the respondents, including age, gender, ethnicity, marital status, and field of study. Table 1 presents the demographic profile of the respondents and provides an overview of the characteristics of the young adults included in the study.

Table 1. Descriptive statistics of the respondents

Variable	Category	Frequency (n)	Percentage (%)
Age	17-22	241	83.39
	23-28	43	14.88
	29 and above	5	1.73
Gender	Female	203	70.24
	Male	86	29.76
Ethnicity	Malay	186	64.36
	Chinese	76	26.3
	Others	19	6.57
	Indian	8	2.77
Marital status	Single	281	97.23
	Married	6	2.08
	Widowed	2	0.69

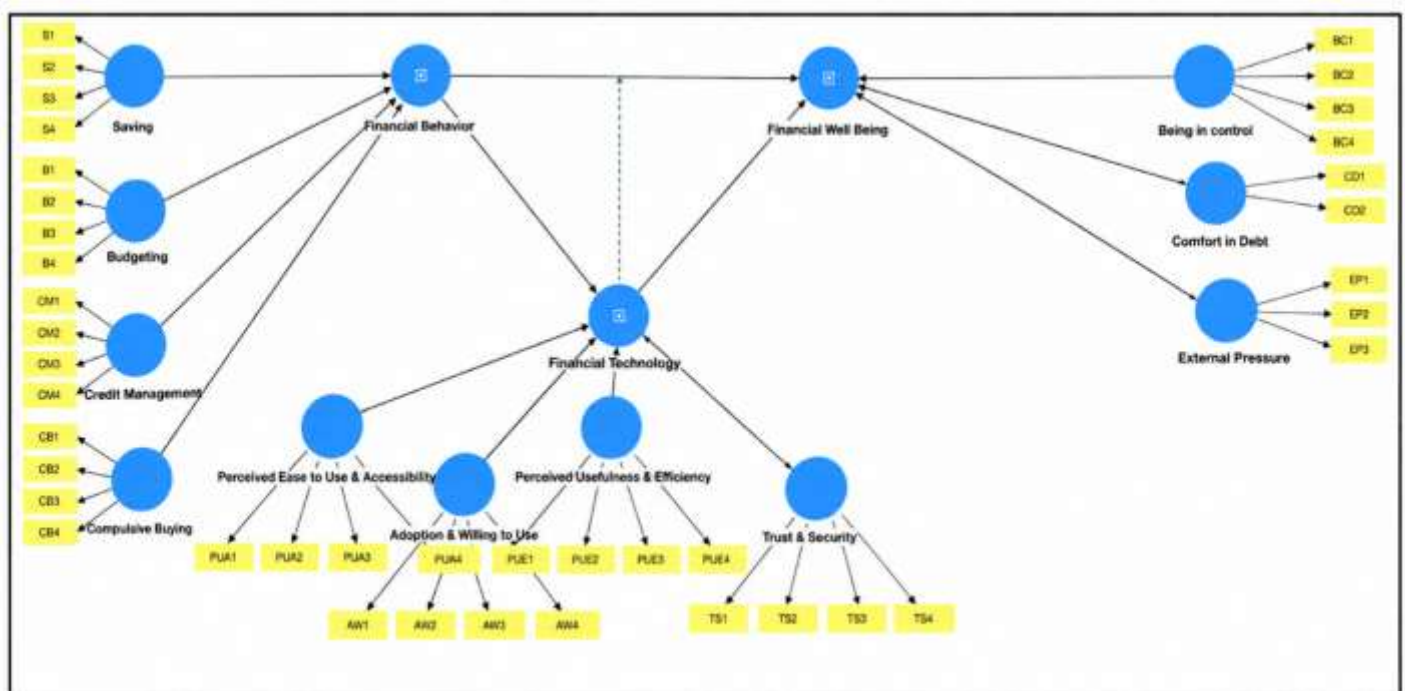
Major field of study	Business	224	77.51
	Non-business	65	22.5

Source: Developed by the authors based on literature

Most respondents are aged 17–22 years, accounting for 83.39% of the sample. Respondents aged 23–28 years represent 14.88%, while those aged 29 years and above constitute only 1.73%. Thus, the sample largely comprises young adults, which is consistent with the population examined in this study. Female respondents represent 70.24% of the sample, while male respondents account for 29.76%. Malay respondents form the largest ethnic group (64.36%), followed by Chinese respondents (26.30%), respondents from other ethnic groups (6.57%), and Indian respondents (2.77%). Although the sample includes respondents from different demographic groups, the use of convenience sampling and the uneven demographic distribution limit the extent to which the findings can be generalised to all Malaysian young adults. Most respondents are single (97.23%), while 2.08% are married and 0.69% are widowed. These characteristics should be considered when interpreting the findings.

Regarding academic background, 77.51% of respondents are enrolled in business-related programmes, while 22.50% are from non-business fields. The dominance of business students suggests a relatively higher level of financial awareness, which may influence financial behaviour and perceptions toward FinTech services. Following the demographic analysis, descriptive statistics were conducted to examine respondents' financial behaviour, attitudes toward debt, external pressures, and FinTech-related perceptions.

Figure 2. Conceptual Framework of the Study



Source: Developed by the authors based on literature

The conceptual framework presented in Figure 2 illustrates the relationships among financial behaviour, FinTech, and financial well-being. Financial behaviour is conceptualised as a higher-order construct comprising budgeting, saving, credit management, and compulsive buying. FinTech is modelled as a multidimensional construct consisting of perceived ease of use and accessibility, perceived usefulness and efficiency, adoption and willingness to use, as well as trust and security. Financial well-being is represented through three key dimensions, namely being in control, comfort in debt, and external pressure.

The framework proposes that financial behaviour influences financial well-being both directly and indirectly through FinTech. In addition, FinTech is hypothesised to act as a moderating variable in the relationship between financial behaviour and financial well-being. Based on this framework, four hypotheses (H1–H4) are developed to examine the direct and interaction effects among the constructs.

Measurement Model Assessment

The measurement model was assessed prior to evaluating the structural relationships. As the study employed a formative–formative hierarchical component model, assessment focused on collinearity, the significance and relevance of the outer weights, and convergent validity.

Collinearity Assessment

Collinearity among the formative indicators was assessed using the variance inflation factor (VIF). The results showed that the VIF values were below the threshold of 5, indicating that multicollinearity did not reach a critical level. Thus, collinearity was not considered a concern in estimating the formative measurement model.

The higher-order construct of Financial Behaviour comprised four lower-order dimensions: Saving, Budgeting, Credit Management, and Compulsive Buying. Financial Technology comprised Perceived Ease of Use and Accessibility, Adoption and Willingness, Perceived Usefulness and Efficiency, and Trust and Security, while Financial Well-Being comprised Being in Control, Comfort in Debt, and External Pressure.

Significance and Relevance of Formative Indicators

The significance and relevance of the formative indicators were assessed using bootstrapping. The results generally showed statistically significant outer weights, indicating that the indicators made meaningful contributions to the formation of their respective constructs.

For Budgeting, all indicators demonstrated statistically significant contributions, including B3 ($\beta = .291$, $t = 2.436$, $p = .015$). Similarly, the indicators of Credit Management demonstrated statistically significant outer weights, supporting their contribution to the construct. Significant outer weights were also observed for the indicators representing Perceived Ease of Use and Accessibility and Perceived Usefulness and Efficiency.

Overall, the findings support the relevance of the indicators in forming their respective lower-order constructs. The measurement model was therefore considered appropriate for subsequent assessment of the structural relationships.

Convergent Validity

Convergent validity of the formative measurement models was assessed using redundancy analysis by relating each formative construct to a global measure of the same conceptual domain. The strength and significance of these relationships were examined to determine whether the formative measures adequately represented their intended constructs. The results demonstrated satisfactory convergent validity, as the relationships between the formative constructs and their respective global measures met the recommended criterion.

Structural Model Assessment

Following satisfactory assessment of the measurement model, the structural model was evaluated to test the hypothesised relationships among Financial Behaviour, Financial Technology, and Financial Well-Being. The assessment considered collinearity among the predictor constructs, path coefficients, statistical significance, explanatory power (R^2), effect sizes (f^2), and predictive performance (Hair et al., 2022).

Hypothesis Testing

The structural model examined the direct effects of Financial Behaviour on Financial Well-Being (H1), Financial Behaviour on Financial Technology (H2), and Financial Technology on Financial Well-Being (H3).

The moderating role of Financial Technology in the relationship between Financial Behaviour and Financial Well-Being was examined through the interaction effect (H4).

Table 2. Structural Model Results and Hypothesis Testing

Hypothesis	Relationship	β	t-value	p-value	Decision
H1	Financial Behavior $\rightarrow$ Financial Well-Being	0.016	0.916	0.360	Not Supported
H2	Financial Behavior $\rightarrow$ FinTech	0.001	1.117	0.264	Not Supported
H3	FinTech $\rightarrow$ Financial Well-Being	0.029	2.251	0.024**	Supported
H4	FinTech $\times$ Financial Behavior $\rightarrow$ Financial Well-Being	0.002	0.175	0.861	Not Supported

Notes: ** 5 % of significance level

The structural relationships among the constructs were evaluated using bootstrapping. The results, including the path coefficients (β), t-values, p-values, and hypothesis decisions, are presented in Table 2. The relationship between Financial Behaviour and Financial Well-Being was positive but not statistically significant ($\beta = 0.016$, $t = 0.916$, $p = 0.360$). Thus, H1 was not supported. This finding indicates that the present study did not find sufficient statistical evidence of a direct relationship between Financial Behaviour and Financial Well-Being among the respondents.

Similarly, the relationship between Financial Behaviour and FinTech was positive but not statistically significant ($\beta = 0.001$, $t = 1.117$, $p = 0.264$). Therefore, H2 was not supported. This suggests that variations in Financial Behaviour were not significantly associated with variations in FinTech within the present sample. In contrast, FinTech was positively and significantly associated with Financial Well-Being ($\beta = 0.029$, $t = 2.251$, $p = 0.024$), providing support for H3.

Although the magnitude of the path coefficient was relatively small, the finding indicates that higher levels of FinTech were associated with higher levels of Financial Well-Being among the respondents. Given the cross-sectional nature of the study, this relationship should be interpreted as an association rather than evidence of causality.

Finally, the interaction effect between FinTech and Financial Behaviour on Financial Well-Being was not statistically significant ($\beta = 0.002$, $t = 0.175$, $p = 0.861$). Hence, H4 was not supported. The result indicates that the study did not find sufficient evidence that FinTech moderates the relationship between Financial Behaviour and Financial Well-Being. In other words, the relationship between Financial Behaviour and Financial Well-Being did not vary significantly according to the level of FinTech in the present sample.

Overall, only H3 was statistically supported, demonstrating a positive association between FinTech and Financial Well-Being. H1, H2, and H4 were not statistically supported. These findings suggest that FinTech exhibited a significant direct association with Financial Well-Being but did not significantly moderate the relationship between Financial Behaviour and Financial Well-Being.

Explanatory Power and Effect Size

The explanatory power of the structural model was evaluated using the coefficient of determination (R^2), as presented in Table 3. R^2 represents the proportion of variance in an endogenous construct accounted for by its predictor constructs. In addition, effect size (f^2) was examined to assess the contribution of individual predictor constructs to the explained variance of the respective endogenous constructs.

Table 3. Coefficient of Determination (R^2)

Endogenous Construct	R^2	Adjusted R^2
Financial Behaviour	0.983	0.982
FinTech	1.000	1.000
Financial Well-Being	0.974	0.974

The results indicate that the model demonstrates substantial explanatory power. Specifically, financial behaviour shows an R^2 value of 0.983, indicating that 98.3% of its variance is explained by its formative dimensions. Similarly, financial well-being has an R^2 value of 0.974, suggesting that the model explains 97.4% of the variance in financial well-being. These unusually high R^2 values arise because the higher-order formative constructs are constructed directly from their lower-order dimensions rather than representing predictive structural relationships.

FinTech exhibits an R^2 value of 1.000 because it is modelled as a higher-order formative construct derived from its lower-order dimensions. Accordingly, this value should not be interpreted in the same manner as an R^2 obtained for an endogenous construct predicted by theoretically distinct structural antecedents. The similarly high R^2 values associated with the higher-order construct specification primarily reflect the way the constructs were modelled. Therefore, claims regarding the structural model's explanatory or predictive power should rely on the relevant endogenous structural relationships and appropriate predictive assessments rather than on these higher-order construct R^2 values alone.

Table 4. Effect Size (f^2) of Structural Relationships

Relationship	f^2	Effect Size
FinTech → Financial Well-Being	0.024	Small
Financial Behaviour → Financial Well-Being	0.005	Negligible
Financial Behaviour → FinTech	0.021	Small
FinTech × Financial Behaviour → Financial Well-Being	0.000	None

The effect size analysis in Table 4 reveals that FinTech has a small effect on financial well-being, while financial behaviour has a negligible effect. The moderating effect is also negligible, further confirming the lack of interaction between financial behaviour and FinTech. In contrast, higher-order dimensions such as credit management and perceived usefulness exhibit large effect sizes, indicating their dominant role in shaping financial behaviour and FinTech, respectively.

Moderating Effect of Financial Technology

The moderating effect of Financial Technology on the relationship between Financial Behaviour and Financial Well-Being was examined through the interaction term between Financial Technology and Financial Behaviour. The results showed that the interaction effect was positive but not statistically significant ($\beta = 0.002$, $t = 0.175$, $p = 0.861$). Therefore, H4 was not supported.

This finding indicates that the present study did not find sufficient statistical evidence that Financial Technology moderates the relationship between Financial Behaviour and Financial Well-Being. In other words, the relationship between Financial Behaviour and Financial Well-Being did not vary significantly according to the level of Financial Technology within the present sample. Although Financial Technology demonstrated a significant direct association with Financial Well-Being (H3), its moderating role was not supported. Thus, the findings suggest that the direct effect of Financial Technology on Financial Well-Being and its proposed moderating effect represent distinct relationships, with empirical support found only for the direct relationship in this study.

Predictive Relevance (Plspredict)

Table 5. PL Spredict Assessment

Assessment	Result
Q ² predict range	0.047–0.743
Highest Q ² predict	PUE3 = 0.743
Lowest Q ² predict	B3 = 0.047
PLS-SEM vs. IA benchmark	PLS-SEM generally showed lower RMSE and MAE values
PLS-SEM vs. LM benchmark	Comparison was limited due to unavailable/zero LM prediction-error values for most indicators

Note: All Q²predict values were greater than zero.

The predictive relevance of the model was assessed using the PLSpredict procedure. As shown in Table 5, the Q²predict values ranged from 0.047 to 0.743 and were positive for all indicators, indicating that the model demonstrated out-of-sample predictive relevance. PUE3 recorded the highest Q²predict value (0.743), whereas B3 recorded the lowest (0.047). Furthermore, the PLS-SEM model generally produced lower RMSE and MAE values than the indicator-average (IA) benchmark. However, comparison with the linear model (LM) benchmark was limited because meaningful LM prediction-error values were not available for most indicators. Therefore, while the findings support the predictive relevance of the model, its predictive performance relative to the LM benchmark cannot be conclusively determined.

DISCUSSION

The findings reveal different roles of Financial Behaviour and FinTech in shaping Financial Well-Being among young adults. Contrary to expectations, Financial Behaviour was not significantly associated with Financial Well-Being ($\beta = 0.016$, $p = 0.360$), and H1 was therefore not supported. Although practices such as saving, budgeting, and credit management are generally considered important for managing personal finances, they may not be sufficient on their own to improve financial well-being. For young adults, financial well-being may also be shaped by their available financial resources, income, and level of financial independence. As these factors were not examined in the present study, however, this explanation should be interpreted with caution.

Financial Behaviour was also not significantly associated with FinTech ($\beta = 0.001$, $p = 0.264$), providing no support for H2. This result implies that the way young adults manage their finances may not necessarily determine their engagement with FinTech. Their use of digital financial services may instead reflect practical and technology-related considerations, such as convenience, accessibility, perceived usefulness, ease of use, and trust.

A different pattern emerged for H3. FinTech was positively and significantly associated with Financial Well-Being ($\beta = 0.029$, $p = 0.024$). This finding highlights the potential role of FinTech in supporting young adults in managing their finances. Easy access to financial information, transaction monitoring, digital payments, and other financial services may make everyday financial management more convenient and accessible. Nevertheless, the relatively small coefficient suggests that FinTech is likely to be only one of several factors associated with Financial Well-Being. Given the cross-sectional design of the study, this relationship should not be interpreted as causal.

The moderating role of FinTech was not supported ($\beta = 0.002$, $p = 0.861$). In other words, FinTech did not significantly change the relationship between Financial Behaviour and Financial Well-Being. Interestingly, this does not diminish the significant direct relationship identified in H3. Rather, the results suggest that FinTech may have its own association with Financial Well-Being without necessarily strengthening the benefits of positive financial behaviour.

Overall, the findings point to a more nuanced role of FinTech in young adults' financial well-being. Its direct relationship with Financial Well-Being was supported, whereas its moderating role was not. The results also suggest that Financial Well-Being is unlikely to depend on financial behaviour alone. Future studies could therefore consider financial literacy, income, financial capability, and financial autonomy to provide a broader understanding of the factors shaping young adults' Financial Well-Being.

CONCLUSIONS

This study examined the relationships among Financial Behaviour, FinTech adoption, and Financial Well-Being among Malaysian young adults using PLS-SEM. The findings revealed that FinTech adoption was positively and significantly associated with Financial Well-Being, whereas Financial Behaviour was not significantly associated with either Financial Well-Being or FinTech adoption. Furthermore, FinTech did not significantly moderate the relationship between Financial Behaviour and Financial Well-Being. These findings suggest that FinTech may have a direct association with Financial Well-Being rather than strengthening the relationship between Financial Behaviour and Financial Well-Being. Given the cross-sectional design of the study, however, these relationships should not be interpreted as causal.

The findings also highlight the importance of looking beyond financial behaviour alone when examining the Financial Well-Being of young adults. Although responsible practices such as saving, budgeting, and credit management remain relevant to personal financial management, their relationship with Financial Well-Being may depend on broader factors such as income, financial resources, and financial autonomy. Future studies could examine these contextual factors to better understand how financial behaviour relates to financial outcomes.

From a practical perspective, the findings highlight the potential value of accessible, useful, secure, and user-friendly digital financial services for young adults. Financial institutions, educators, and FinTech providers could consider integrating digital financial tools with financial education initiatives, particularly tools that support expenditure monitoring, budgeting, financial planning, and informed financial decision-making. Such initiatives should complement, rather than replace, efforts to strengthen responsible financial behaviour and financial literacy.

From a policy perspective, the findings may be relevant to initiatives aimed at strengthening digital financial inclusion and the financial resilience of young adults in Malaysia. Policymakers could consider supporting access to trustworthy and inclusive digital financial services alongside financial education and consumer protection initiatives. At the same time, policy interventions should recognise that technology alone may not address all aspects of Financial Well-Being, particularly where young adults face constraints related to income, financial resources, and financial autonomy.

Overall, this study contributes to the literature by distinguishing between the direct and moderating roles of FinTech in Financial Well-Being. The significant direct association between FinTech and Financial Well-Being, together with the absence of a significant moderating effect, suggests that the role of FinTech in young

adults' Financial Well-Being may be more nuanced than initially proposed. Future research using longitudinal designs, more diverse samples, and additional socioeconomic factors could provide a deeper understanding of how FinTech and Financial Behaviour relate to Financial Well-Being among Malaysian young adults.

REFERENCES

1. Abdul Halim, N., Mohd Salleh, S., Mustapa, S. N. S., Rozali, N., & Mat Khairi, S. M. (2024). From instant gratification to long-term consequences: How buy now, pay later influences consumer behavior and financial stability. *International Journal of Research and Innovation in Social Science*, 8(9), 403–411. <https://doi.org/10.47772/IJRISS.2024.809035>
2. Ahmad Nazmi, A. N., Lye, C.-T., & Tay, L.-Y. (2024). Promoting robo-advisor adoption among B40 in Malaysia through advisory transparency and UTAUT models. *Engineering, Technology & Applied Science Research*, 14(6), 18727–18733. <https://doi.org/10.48084/etasr.8289>
3. Alkhawaldeh, B. Y., Alhawamdeh, H., Al-Afeef, M. A. M., Abu-Alhija, S. M. M., Al_Rawashdeh, H. A. A., Bani Mustafa, S. M., Abozraiq, A. M., & Almarshad, M. (2023). Mediating effect of financial behaviour on the influence of financial literacy and FinTech on financial inclusion development in Jordanian MSMEs. *Journal of Hunan University (Natural Sciences)*, 50(3). <https://doi.org/10.55463/issn.1674-2974.50.3.10>
4. Amnas, M. B., Selvam, M., Raja, M., Santhoshkumar, S., & Parayitam, S. (2023). Understanding the determinants of FinTech adoption: Integrating UTAUT2 with trust theoretic model. *Journal of Risk and Financial Management*, 16(12), 505. <https://doi.org/10.3390/jrfm16120505>
5. Balatif, M. R., Fachrudin, K. A., Silalahi, A. S., Syahyunan, & Torong, M. Z. B. (2024). The effect of financial education and financial stress on financial well-being with the use of FinTech. *Quality – Access to Success*, 25(199), 108–118. <https://doi.org/10.47750/QAS/25.199.12>
6. Bernama. (2025, February 27). Household debt stands at RM1.63 trillion, much lower than financial assets – Finance Ministry. *New Straits Times*. <https://www.nst.com.my/news/nation/2025/02/1181364/household-debt-stands-rm163-trillion-much-lower-financial-assets->
7. Brüggen, E. C., Hogreve, J., Holmlund, M., Kabadayi, S., & Löfgren, M. (2017). Financial well-being: A conceptualization and research agenda. *Journal of Business Research*, 79, 228–237. <https://doi.org/10.1016/j.jbusres.2017.03.013>
8. Business Today Editorial. (2025, March 13). Youth bankruptcy cases on the rise, says Hannah Yeoh. *Business Today*. <https://www.businesstoday.com.my/2025/03/13/youth-bankruptcy-cases-on-the-rise-says-hannah-yeoh/>
9. Consumer Financial Protection Bureau. (2017). Financial well-being in America. https://files.consumerfinance.gov/f/documents/201709_cfpb_financial-well-being-in-America.pdf
10. Dew, J., & Xiao, J. J. (2011). The financial management behavior scale: Development and validation. *Journal of Financial Counseling and Planning*, 22(1), 43–59.
11. Gafoor, A., & Amilan, S. (2024). Fintech adoption and financial well-being of persons with disabilities: The mediating role of financial access, financial knowledge and financial behaviour. *International Journal of Social Economics*, 51(11), 1388–1401. <https://doi.org/10.1108/IJSE-08-2023-0596>
12. Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2022). *A primer on partial least squares structural equation modeling (PLS-SEM)* (3rd ed.). SAGE Publications.
13. Hilgert, M. A., Hogarth, J. M., & Beverly, S. G. (2003). Household financial management: The connection between knowledge and behaviour. *Federal Reserve Bulletin*, 89(7), 309–322.
14. Khatun, N., & Tamanna, M. (2020). Factors affecting the adoption of FinTech: A study based on the financial institutions in Bangladesh. *Copernican Journal of Finance & Accounting*, 9(4), 51–75. <https://doi.org/10.12775/CJFA.2020.021>
15. Low, K. C., Chong, S. L., Mohamad, S. S., & Arshad, R. (2023). Digital financial literacy among young adults in Malaysia. In N. M. Suki et al. (Eds.), *Strengthening governance, enhancing integrity and navigating communication for future resilient growth* (Vol. 132, pp. 391–401). *European Proceedings of Social and Behavioural Sciences*. <https://doi.org/10.15405/epsbs.2023.11.02.29>

16. Mahdzan, N. S., Sabri, M. F., Husniyah, A. R., Magli, A. S., & Chowdhury, N. T. (2023). Digital financial services usage and subjective financial well-being: Evidence from low-income households in Malaysia. *International Journal of Bank Marketing*, 41(2), 395–427. <https://doi.org/10.1108/IJBM-06-2022-0226>
17. Menberu, A. W. (2024). Technology-mediated financial education in developing countries: A systematic literature review. *Cogent Business & Management*, 11(1), Article 2294879. <https://doi.org/10.1080/23311975.2023.2294879>
18. Munna, N. N., Widiastuti, A., & Riyoko, S. (2025). The impact of FinTech on employee well-being in PDAM Jepara: Mediating roles of financial literacy and lifestyle. *Golden Ratio of Finance Management*, 5(1), 239–251. <https://doi.org/10.52970/grfm.v5i1.1099>
19. Ojiaku, O. C., Ezenwafor, E. C., & Osarenkhoe, A. (2024). Integrating TTF and UTAUT models to illuminate factors that influence consumers' intentions to adopt financial technologies in an emerging country context. *International Journal of Technology Marketing*, 18(1), 113–135. <https://doi.org/10.1504/IJTMKT.2024.135674>
20. Sabri, M. F., Anthony, M., Law, S. H., Rahim, H. A., Burhan, N. A. S., & Ithnin, M. (2023). Impact of financial behaviour on financial well-being among young adults in Malaysia. *Journal of Financial Services Marketing*, 29(3), 788–807. <https://doi.org/10.1057/s41264-023-00234-8>
21. Sabri, M. F., Wahab, R., Mahdzan, N. S., Magli, A. S., & Rahim, H. A. (2022). Mediating effect of financial behaviour on the relationship between perceived financial wellbeing and its factors among low-income young adults in Malaysia. *Frontiers in Psychology*, 13, 858630. <https://doi.org/10.3389/fpsyg.2022.858630>
22. Shankar, N., Vinod, S., & Kamath, R. (2022). Financial well-being – A Generation Z perspective using a structural equation modeling approach. *Investment Management and Financial Innovations*, 19(1), 32–50. [https://doi.org/10.21511/imfi.19\(1\).2022.03](https://doi.org/10.21511/imfi.19(1).2022.03)
23. Sultana, N., Chowdhury, R. S., & Haque, A. (2023). Gravitating towards FinTech: A study on undergraduates using extended UTAUT model. *Heliyon*, 9(10), e20731. <https://doi.org/10.1016/j.heliyon.2023.e20731>
24. Taiwo, A. A., & Downe, A. G. (2013). The theory of user acceptance and use of technology (UTAUT): A meta-analytic review of empirical findings. *Journal of Theoretical and Applied Information Technology*, 49(1), 48–58. <http://www.jatit.org/volumes/Vol49No1/7Vol49No1.pdf>
25. Tajul Urus, S., Othman, I. W., Syed Mustapha Nazri, S. N. F., & Kurniasari, F. (2022). Fintech payment services among fresh graduates: The UTAUT model perspective. *International Journal of Academic Research in Accounting, Finance and Management Sciences*, 12(3), 850–869. <https://doi.org/10.6007/IJARAFMS/v12-i3/15161>
26. Venkatesh, V., Morris, M. G., Davis, G. B., & Davis, F. D. (2003). User acceptance of information technology: Toward a unified view. *MIS Quarterly*, 27(3), 425–478. <https://doi.org/10.2307/30036540>
27. Venkatesh, V., Thong, J. Y. L., & Xu, X. (2012). Consumer acceptance and use of information technology: Extending the unified theory of acceptance and use of technology. *MIS Quarterly*, 36(1), 157–178. <https://doi.org/10.2307/41410412>
28. Wismantoro, Y., & Susilowati, M. W. K. (2021). How does unified theory of acceptance and use of technology (UTAUT) work on adopting financial technology (FinTech) by MSMEs? *Jurnal Penelitian Ekonomi dan Bisnis*, 6(2), 90–99.
29. Yue, P., Korkmaz, A. G., Yin, Z., & Zhou, H. (2022). The rise of digital finance: Financial inclusion or debt trap? *Finance Research Letters*, 47, 102604. <https://doi.org/10.1016/j.frl.2022.102604>
30. Zhang, Y., & Fan, L. (2024). The nexus of financial education, literacy and mobile FinTech: Unraveling pathways to financial well-being. *International Journal of Bank Marketing*, 42(7), 1789–1812. <https://doi.org/10.1108/IJBM-09-2023-0531>