

# DIGITAL SMARTS, FINANCIAL STARTS: HOW DIGITAL FINANCIAL LITERACY INFLUENCES SPENDING, SAVING, AND FINANCIAL WELL-BEING

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**Abstract:** *In recent years, digital financial literacy (DFL) has garnered considerable attention due to the growing integration of digital technologies into daily life. While younger generations are often assumed to be naturally adept with technology, studies suggest that their skills in managing finances in the digital environment remain limited. This study investigates the impact of DFL on spending behaviour, saving habits, and financial well-being (FWB) among members of Generations Y and Z. Using purposive sampling, data were collected through an online questionnaire, yielding responses from 167 participants. The findings indicate that DFL positively and significantly influences saving behaviour and FWB but does not have a significant effect on spending behaviour. Furthermore, saving behaviour mediates the relationship between DFL and FWB, however spending behaviour does not moderate this relationship. From a theoretical perspective, this study contributes to the relatively sparse literature on DFL and its role in shaping financial behaviours among Gen Y and Gen Z. Practically, the results highlight the importance of improving individuals' skills in using digital tools and platforms to enhance their financial decision-making. Future research could benefit from including factors such as digital trust and awareness of digital security to gain a more comprehensive understanding of financial behaviour in the digital age. Additionally, adopting a longitudinal approach could provide valuable insights into how DFL develops over time and influences financial practices across different stages of life.*

**Keywords:** *Digital financial literacy, spending, saving, financial well-being, Gen Y and Z.*

## Introduction

In contemporary times, rapid advancements in technology and digitalization have significantly transformed various industries, with the financial technology (fintech) sector being among the most impacted. The widespread adoption of online banking, e-wallets, and investment applications has made digital financial services increasingly accessible and indispensable. As these services continue to evolve, the need for individuals to be both digitally competent and financially literate has become more critical than ever. This growing necessity has given rise to the concept of digital financial literacy (DFL), which emphasizes the importance of understanding and effectively utilizing digital financial tools.

Despite its rising relevance, DFL remains an emerging area of research (Zaimovic et al., 2025), characterized by the lack of a universally accepted and comprehensive definition (Lyons & Kass-Hanna, 2021). Nonetheless, scholars and organizations have undertaken efforts to conceptualize DFL, highlighting its multidimensional nature and significance in the modern financial landscape. Prasad et al. (2018) defined DFL as an individual's ability to understand and navigate online transactions, digital payment systems, internet-based shopping, and online banking. Expanding on this, Tony and Desai (2020) described DFL as a fusion of traditional financial literacy and the competencies required to operate within digital financial environments. More recently, the Alliance for Financial Inclusion (2021) defined DFL as the knowledge, skills, confidence, and competencies needed to securely access and use digital financial tools. In a similar vein, the Organisation for Economic Co-operation and Development (2022) emphasized DFL as the capacity to effectively engage with financial products and services via digital platforms. Collectively, these definitions point out to the necessity of possessing both financial knowledge and digital aptitudes to navigate the modern financial landscape.

DFL has garnered increasing attention from policymakers, educators, financial institutions, and governments, who recognize its vital role in advancing financial inclusion and resilience in the digital era. While institutional support is essential in promoting digital financial education, the responsibility ultimately rests at the individual level. Without such capabilities, individuals risk exclusion from formal financial systems and heightened vulnerability to jeopardies in the digital space. Therefore, strengthening DFL is crucial for informed decision-making and full participation in the digital economy (Rehman & Mia, 2024).

The urgency to enhance DFL has also been heightened by the global surge in financially motivated cyber scams. In Malaysia alone, online crime cases rose by 37% between January and November 2023, leading to financial losses of RM1.13 billion, a 46% increase from the previous year (Mohd Reda, 2023). These scams not only cause significant personal losses but also threaten broader economic stability. Improving DFL thus becomes essential not only for individual financial well-being (FWB) but also as a strategy for protecting national financial security (Wan Nawang, 2024). Beyond fraud prevention, DFL shapes responsible financial management practices. It enables individuals to monitor spending, set savings goals, and manage personal budgets effectively using digital platforms (Yeo et al., 2024). In doing so, DFL enhances financial responsibility, supports long-term FWB, and fosters resilience in an increasingly digital financial environment (Aryan et al., 2024).

While DFL is important for all age groups, it holds particular significance for Generations Y and Z. These cohorts, as digital natives, are naturally inclined toward digital financial services yet face financial pressures such as rising living costs, debt burdens, and consumer-driven lifestyles (Aryan et al., 2024; Yeo et al., 2024). These challenges complicate decision-making

and increase the risk of financial mismanagement, making strong DFL an essential foundation for informed financial choices (Ban et al., 2025; Yadav et al., 2025). Sound spending habits and consistent saving practices remain vital for resilience, but achieving this balance requires both knowledge and discipline (Lone et al., 2025).

### Problem Statement

DFL remains in its infancy as an emerging field, with limited studies examining its impact, particularly among Generations Y and Z, who are widely recognized for their tech-savviness and comfort with digital tools. Yet, despite this technological fluency, these cohorts continue to face persistent financial mismanagement. While highly active in digital financial ecosystems, many exhibit inconsistent saving habits coupled with impulsive or excessive digital spending (Shafee et al., 2023; Zainudin et al., 2019). This paradox suggests that digital skills alone are insufficient for fostering responsible financial behaviour. Furthermore, saving and spending behaviours differ fundamentally. Saving reflects discipline, delayed gratification, and future-oriented planning, while spending is often influenced by lifestyle aspirations, peer dynamics, and immediate consumption preferences. Consequently, young adults may be digitally adept yet still fail to balance these behaviours. Understanding why individuals actively spend but save little, or save yet overspend, remains an unresolved challenge.

Finally, existing studies have not adequately addressed these dynamics. Much of the current research on DFL and financial behaviour remains descriptive, focusing on direct effects without examining potential mediating or moderating mechanisms. In the Malaysian context, where digital financial adoption is rapidly expanding, there is still limited empirical investigation into how DFL translates into distinct financial behaviours, and under what conditions these relationships may be strengthened or weakened (Mohd Isa & Kim, 2024). Addressing these gaps is essential to advance theoretical understanding and to design interventions that effectively promote balanced financial management among younger generations.

### Literature Review

#### Theory of Planned Behavioural

Human behaviour is a complex and multifaceted construct shaped by the dynamic interplay of biological, psychological, social, and environmental factors. Understanding these behaviours provides valuable insights into individual and group patterns, underlying motivations, and decision-making processes. Such insights are essential for enhancing societal well-being, informing effective policy development, and fostering healthier interpersonal interactions. Over time, various theoretical frameworks have been developed to explain and predict human intention and behaviour, with the Theory of Planned Behaviour (TPB), introduced by Ajzen in 1975, standing out as one of the most influential and widely applied. TPB posits that behavioural intention, shaped by attitudes, subjective norms, and perceived behavioural control, is the primary predictor of actual behaviour. Its structured framework has proven particularly useful in exploring a wide range of behavioural domains, including financial decision-making.

Disdain its strengths, TPB has been critiqued for focusing predominantly on rational decision-making and underrepresenting emotional and affective influences on behaviour. In response, researchers have extended the model to incorporate both rational and emotional dimensions, enabling a more holistic understanding of behavioural intention (Samoggia et al., 2024). Ajzen (2011) himself has supported such adaptations, recognizing their potential to improve the model's explanatory power and relevance across diverse behavioural contexts (Kim et al., 2024).

Building on these developments, the present study adopts the TPB as its foundational framework to investigate how DFL influences financial outcomes among Generations Y and Z. Specifically, the study examines the impact of DFL on spending and saving behaviours, which are further conceptualized as mediating variables in the relationship between DFL and FWB. Prior research has established that both spending and saving decisions are influenced by a combination of rational judgments and emotional factors (Barrafrem et al., 2024; Carter, 2014; Nagina, 2025; Nyhus, 2017). Accordingly, this study draws on the TPB as its theoretical underpinning to incorporate both rational and emotional aspects of financial behaviour, thereby providing a more comprehensive account of how DFL shapes FWB through day-to-day financial choices.

### Financial Well-Being

Financial well-being (FWB) is commonly defined as an individual's ability to meet current and future financial obligations, manage day-to-day finances, absorb financial shocks, and enjoy the freedom to make choices that support their desired lifestyle and overall quality of life (Brüggen et al., 2017; Consumer Financial Protection Bureau, 2015; Hasler et al., 2023). As a multidimensional and subjective construct, FWB has been extensively studied across various domains, with research identifying a wide range of determinants, including psychological, behavioural, economic, and demographic factors. Notwithstanding this extensive body of research, FWB remains a dynamic, evolving, and highly subjective construct (Nanda & Banerjee, 2021), as it is shaped by complex and ever-changing financial environments and individual circumstances (Rittsalu et al., 2024; Zyphur et al., 2015). As such, ongoing research into the factors that influence FWB remains both relevant and necessary.

In response to the increasingly digital nature of financial systems, this study focuses on DFL as a key emerging determinant of FWB. Additionally, it examines spending and saving behaviours, which are particularly important given the rise of e-commerce, digital payment platforms, and consumer-targeting algorithms that tend to encourage impulsive spending and discourage consistent saving. These trends are especially relevant for Generations Y and Z, who are not only highly active in digital financial spaces but also more susceptible to the financial pressures and temptations of the digital marketplace. By investigating the roles of DFL, spending, and saving, this study aims to contribute to a more comprehensive understanding of how young, digitally engaged adults can achieve and sustain FWB in an increasingly complex financial landscape.

### Digital Financial Literacy

In today's progressively digital world, digital literacy has become essential, particularly in the realm of personal finance, where decisions are often complex, high-stakes, and a significant source of stress. DFL plays a critical role in enabling individuals to make informed financial decisions and engage meaningfully with the formal financial system. It also enhances their ability to navigate and utilize digital financial technologies, an increasingly vital skill in the current rapidly evolving financial environment (Abdallah et al., 2025; Amnas et al., 2024; Bhat et al., 2024).

A growing body of research has demonstrated the positive impact of DFL on a variety of financial behaviours and outcomes. For example, Ravikumar et al. (2022) and Zaimovic et al. (2023) found that higher levels of DFL significantly improved individuals' ability to interact with digital financial platforms. In terms of behavioural outcomes, Abdallah et al. (2025) and Aryan et al. (2024) reported that individuals with stronger DFL exhibited more responsible



spending patterns, including reduced impulsivity and increased budgeting discipline. Similarly, Johnson et al. (2023) and Setiawan et al. (2022) found that DFL enhances saving behaviour, as individuals with greater digital competence are better able to access and manage savings tools, such as mobile banking apps and automated savings platforms. Moreover, Sabri et al. (2023) and Setiawan et al. (2022) linked DFL to improved financial planning and FWB, highlighting that individuals with higher DFL experience lower financial stress, greater control over their finances, and higher overall life satisfaction.

However, findings on the impact of DFL are not entirely consistent. Some studies suggest that even individuals with high levels of DFL may still engage in impulsive spending or maintain low saving rates, indicating that technological fluency alone does not necessarily ensure FWB (Shafee et al., 2023; Zainudin et al., 2019; Mohd Isa & Kim, 2024; Wan Nawang, 2024). These contradictory results highlight the need for further investigation into the mechanisms through which DFL influences financial behaviours among young adults. To provide a structured understanding, this study adopts the multidimensional framework proposed by Morgan et al. (2019), which encompasses four key components: digital awareness, digital knowledge, digital control, and digital rights. Empirically validated in the Malaysian context by Liew et al. (2020), this framework reliably assesses DFL across diverse populations. Grounding the study in this framework allows for a comprehensive examination of how DFL shapes spending behaviour, saving behaviour, and overall financial well-being among young Malaysian adults, particularly those from Generations Y and Z.

### **Spending Behaviour**

According to Mitchell (2008), spending behaviour entails participating in financial activities that bring enjoyment and reflect one's lifestyle and personal satisfaction, while Setiawan et al. (2022) define it as a pattern shaped by an individual's habits, preferences, and financial objectives. In essence, spending behaviour reflects how individuals use money to fulfil personal needs and goals, guided by their financial habits and lifestyle choices. Spending is a common and necessary aspect of life, yet it is often regarded as potentially harmful due to its association with financial stress and negative impacts on FWB (Aw et al., 2018). Prior research has highlighted growing concerns over spending habits, stressing that prudent and balanced spending is essential for achieving and sustaining financial well-being (Aknin et al., 2018; Van Praag & Frijters, 2003; Zainol et al., 2024). Responsible spending behaviour, such as budgeting, avoiding impulsive purchases, and living within one's means, has been consistently linked to improved financial outcomes and reduced financial anxiety. Conversely, poor spending habits, including excessive or impulsive consumption, often result in debt accumulation and financial instability (Dali et al., 2023), ultimately undermining an individual's FWB.

### **Saving Behaviour**

Saving is commonly defined as the portion of an individual's money or income that is not spent but set aside for future use (Bhatia & Tyagi, 2018; Tharanika & Andrew, 2017). Consequently, saving behaviour refers to the consistent practice of allocating part of one's money or income to address future needs, manage emergencies, or achieve financial goals (Setiawan et al., 2022). It reflects the ability to prioritise long-term financial security over immediate consumption. Strong saving habits are associated with greater financial resilience, lower susceptibility to economic shocks, and enhanced psychological well-being. Numerous studies have shown that individuals who save regularly tend to report higher financial satisfaction, a key component of FWB (Hasler et al., 2023; Sabri et al., 2023; She et al., 2022). Contrarywise, poor saving behaviour can undermine the capacity to build financial buffers and achieve long-term stability. This relationship is especially important for Generations Y and Z, digitally savvy cohorts who

face unique financial challenges such as rising living costs and shifting job markets, making the ability to manage unexpected financial demands through strong saving behaviour critical to their overall well-being in today's uncertain economic climate.

### **Mediating Variables**

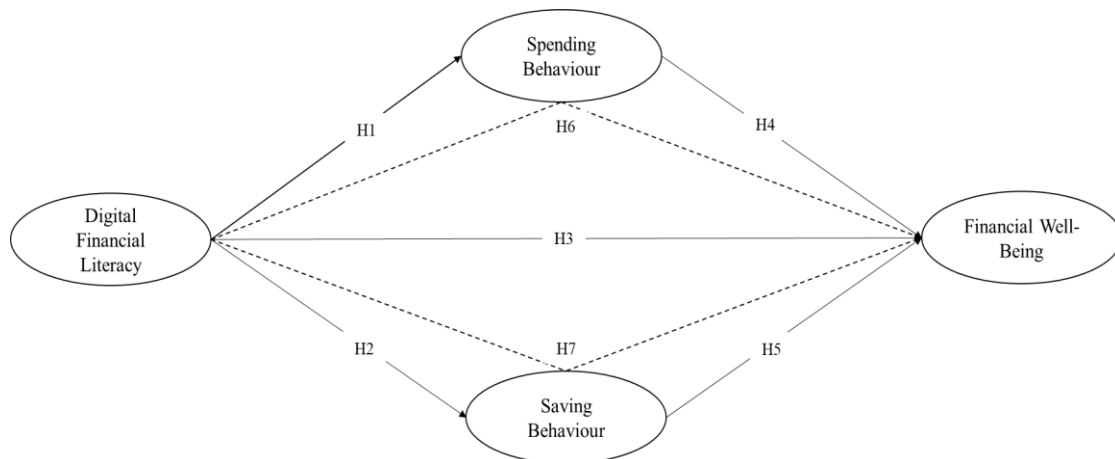
In behavioural research, examining mediating variables is crucial for understanding the mechanisms through which one variable influences another (Wu & Zumbo, 2008). Mediators help explain how or why an independent variable affects a dependent outcome (Baron & Kenny, 1986; Frazier et al., 2004), offering a deeper and more inclusive understanding of complex relationships. In the context of this study, spending and saving behaviours are proposed as mediators in the relationship between DFL and FWB. Individuals with higher levels of DFL are more likely to possess the knowledge and skills necessary to make informed financial decisions, which can translate into more responsible spending and consistent saving habits. These behaviours, in turn, are known to enhance financial security and reduce stress, key components of FWB. This mediating pathway is particularly relevant for Generations Y and Z, who are constantly exposed to digital financial tools and online consumer environments. Understanding these mediating effects can provide more targeted insights for financial education and intervention programs aimed at improving young adults' financial outcomes.

### **Critical Synthesis and Research Gap**

Although existing studies suggest that DFL positively influences spending, saving, and FWB, research examining the impact of DFL on spending and saving behaviours remains limited, as DFL is still an emerging and under-researched area (Abdallah et al., 2025; Adnan et al., 2023; Goyal & Kumar, 2021; Lukas & Lukas, 2024). Consequently, empirical evidence on these relationships is scarce. This gap highlights a lack of understanding of how digital literacy translates into concrete financial outcomes among young adults. Interestingly, reports paint a contrasting picture: despite being digitally savvy, many young adults increasingly fall victim to online scams, engage in excessive spending, and struggle to save consistently (Wan Nawang, 2024). These contradictory trends indicate that technological proficiency alone does not necessarily lead to responsible financial behaviour, emphasizing the need for more comprehensive investigation. Additionally, as DFL remains an emerging research area, there is a scarcity of studies that specifically examine the mediating roles of spending and saving behaviours in shaping the FWB of Malaysian young adults, particularly those from Generations Y and Z. This gap highlights the need for deeper investigation into how these behaviours translate digital financial competencies into tangible financial outcomes.

### **Conceptual Framework**

Building on the literature above, Figure 1 presents the conceptual framework for the study.



**Figure 1: Research Framework**

Accordingly, the following hypotheses are proposed:

**H<sub>1</sub>:** DFL positively influences spending behaviour.

**H<sub>2</sub>:** DFL positively influences saving behaviour.

**H<sub>3</sub>:** DFL positively influences FWB.

**H<sub>4</sub>:** Spending behaviour positively influences FWB.

**H<sub>5</sub>:** Saving behaviour positively influences FWB.

**H<sub>6</sub>:** Spending behaviour mediates the relationship between DFL and FWB.

**H<sub>7</sub>:** Saving behaviour mediates the relationship between DFL and FWB.

## Methodology

### Research Design

This study employed a quantitative, cross-sectional research design to investigate the role of DFL in shaping the financial behaviours and outcomes of Malaysians young adults from Gen Y and Gen Z. Specifically, the study examines how DFL influences spending behaviour, saving behaviour, and ultimately, FWB. The cross-sectional approach was deemed appropriate for capturing a snapshot of these relationships at a specific point in time, allowing for the exploration of patterns and associations among the key variables across a diverse group of participants. Data were collected via an online questionnaire, enabling wide geographic reach and accessibility among digitally engaged young adult populations. This methodological approach is well-suited for studying digital literacy-related constructs, as it aligns with the participants' typical mode of financial and information engagement, through digital platforms.

### Sampling and Sample Size

A purposive sampling technique was employed to recruit participants from Generations Y and Z, aged 18 to 43 years. The sampling criteria specifically included both students (undergraduate and postgraduate) and working young adults from various sectors, as these groups collectively represent Generations Y and Z and are actively engaged with digital financial services, reflecting key segments undergoing transitions in financial behaviour. Participants were drawn from five major regions in Malaysia, Central, Eastern, Northern, Southern, and Western, as well as from Sabah and Sarawak, ensuring a geographically and demographically diverse sample to capture a comprehensive view of young adults nationwide.

A total of 167 valid responses were collected. The sample size falls within the range recommended for behavioural research by Roscoe (1975) and Sekaran and Bougie (2016), who suggest sample sizes between 30 and 500, depending on study complexity. To further validate the adequacy of the sample for Partial Least Squares Structural Equation Modelling (PLS-SEM) analysis, a power analysis was conducted using G\*Power 3.1. Assuming a medium effect size ( $f^2$ ) of 0.15, a significance level of 0.05, a power of 0.80, and a maximum of three predictors in the structural model, the minimum required sample size was determined to be 77. Thus, the collected sample of 167 exceeds this threshold, confirming its adequacy for reliable and valid model estimation, in accordance with guidelines by Hair et al. (2022) and Cohen (1988).

### Measurement

The constructs in the study were measured using validated instruments adapted from previous research. The DFL instrument, consisting of eighteen items covering digital awareness, digital knowledge, digital control, and digital rights, was adapted from Morgan et al. (2019). Six items assessing spending behaviour and four items assessing saving behaviour were sourced from Setiawan et al. (2022), while eight items measuring FWB were adopted from Sabri et al. (2023). All responses were recorded using a five-point Likert scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree), enabling assessment of respondents' levels of agreement with each statement.

### Data Cleaning and Analysis

As the survey was conducted online, all questions were set as compulsory, ensuring no missing responses (Evans & Mathur, 2005; Sue & Ritter, 2012). The dataset was further screened for response quality, including checks for inconsistencies, outliers, and straight-lining patterns. It is noted that PLS-SEM does not require the dataset to follow a normal distribution, making it robust for non-normal data (Hair et al., 2011). After this cleaning process, all 167 responses were deemed valid and retained for analysis (Hair et al., 2019; Henseler et al., 2015).

Data analysis was then conducted using PLS-SEM via SmartPLS version 4.0. PLS-SEM was chosen for its ability to handle complex models while simultaneously assessing both the measurement model (reliability and validity of constructs) and the structural model (hypothesized relationships among variables) (Hair et al., 2019). This approach is particularly suitable for exploratory research and smaller sample sizes, providing robust and comprehensive insights into the strength, direction, and significance of relationships between the study's constructs.

## Results

### Demographic Profile

The detailed demographic profile of the respondents is presented in Table 1. The study sample comprises 167 respondents with a diverse demographic background. Gender distribution is nearly balanced, with 50.3% male and 49.7% female participants. The largest age group falls within the 23 to 27 age range, representing 34.7% of the sample. In terms of ethnicity, the majority of respondents identify as Malay (84.4%), followed by Chinese (7.8%), Indian (6.6%), and other ethnicities (1.2%). Most participants are single (71.9%) and hold a Bachelor's degree (54.5%). Students make up the largest occupational group at 53.9%, followed by those employed in the private sector (19.8%) and in government or semi-government positions (15%). Reflecting the high proportion of students, nearly half of the respondents report a monthly income of RM2,000 or less. The remaining respondents fall within the RM2,001–RM4,000 (23.4%) and RM4,001–RM6,000 (20.4%) income brackets. Geographically, the



majority reside in the Southern region (30.5%), followed by the Northern (25.1%), Central (24%), Eastern (15%), and the states of Sabah and Sarawak (5.4%).

The respondents were also asked about their money mindset and whether digital finance tools like e-wallets and online banking have improved their finances. The majority of respondents (64.1%) identified themselves as savers, while 35.9% considered themselves spenders, indicating a stronger tendency toward saving among the participants. Additionally, a significant proportion of the sample (89.2%) reported that digital financial tools have improved their financial management. Only a small fraction (4.2%) felt these tools did not improve their finances, and 6.6% were uncertain about their impact. These findings suggest that most young adults in the study not only lean towards saving but also view digital financial technologies positively in supporting their FWB.

**Table 1: Demographic Profile of Respondents**

| Categories                    | Frequency | Percentage |
|-------------------------------|-----------|------------|
| <i>Gender</i>                 |           |            |
| Male                          | 84        | 50.3       |
| Female                        | 83        | 49.7       |
| <i>Age</i>                    |           |            |
| 18 - 22                       | 54        | 32.3       |
| 23 - 27                       | 58        | 34.7       |
| 28 - 32                       | 18        | 10.8       |
| 33 - 37                       | 22        | 13.2       |
| 38 - 43                       | 15        | 9.0        |
| <i>Ethnicity</i>              |           |            |
| Malay                         | 141       | 84.4       |
| Chinese                       | 13        | 7.8        |
| Indian                        | 11        | 6.6        |
| Other                         | 2         | 1.2        |
| <i>Marital Status</i>         |           |            |
| Single                        | 120       | 71.9       |
| Married                       | 47        | 28.1       |
| <i>Education Level</i>        |           |            |
| Secondary or Pre-Uni          | 36        | 21.6       |
| Diploma                       | 31        | 18.6       |
| Bachelor Degree               | 91        | 54.5       |
| Master                        | 9         | 5.4        |
| <i>Occupation</i>             |           |            |
| Private                       | 33        | 19.8       |
| Government/ Semi Government   | 25        | 15.0       |
| Business owner/ Self-employed | 17        | 10.2       |
| Unemployed                    | 2         | 1.2        |
| Student                       | 90        | 53.9       |
| <i>Monthly Income</i>         |           |            |
| RM2,000 and below             | 83        | 49.7       |
| RM2,001 - RM4,000             | 39        | 23.4       |
| RM4,001 - RM6,000             | 34        | 20.4       |
| RM6,001 and above             | 11        | 5.6        |
| <i>Region of Residence</i>    |           |            |
| Central                       | 40        | 24.0       |
| Northern                      | 42        | 25.1       |
| Southern                      | 51        | 30.5       |
| Eastern                       | 25        | 15.0       |

|   |     |      |
|---|-----|------|
| Sabah & Sarawak   | 9   | 5.4  |
| <i>How would you describe your money mindset?</i>   |     |      |
| Spender   | 60  | 35.9 |
| Saver   | 107 | 64.1 |
| <i>Have digital finance tools like e-wallets and online banking improved your finances?</i> |     |      |
| Yes   | 149 | 89.2 |
| No  | 7   | 4.2  |
| Not Sure  | 11  | 6.6  |

### Assessment of Measurement Model

The PLS-SEM approach evaluates the measurement model by examining its reliability, convergent validity, and discriminant validity through several criteria, including Cronbach's alpha, factor loadings, composite reliability (CR), average variance extracted (AVE), and the Heterotrait-Monotrait Ratio (HTMT). According to established guidelines, factor loadings should be greater than 0.7 (Hair et al., 2011), Cronbach's alpha values should exceed 0.7 (Nunnally, 1978), CR must be above 0.7 (Hair et al., 2019), AVE should surpass 0.5 (Hair et al., 2019), and HTMT values are expected to be below 0.90 (Henseler et al., 2015).

### Assessment of Reliability and Convergent Validity

Several items, DFL1 (0.644), DFL2 (0.677), DFL3 (0.674), DFL6 (0.668), DFL12 (0.654), DFL13 (0.591), and DFL14 (0.633), were removed due to factor loadings falling below the minimum acceptable threshold. All remaining indicators, however, meet or exceed the recommended criteria, thereby confirming the reliability and validity of the measurement model, as shown in Table 2.

**Table 2: Validity and Reliability Results**

| Construct                  | Items  | Loading | Cronbach's alpha | CR    | AVE   |
|----------------------------|--------|---------|------------------|-------|-------|
| Digital Financial Literacy | DFL4   | 0.719   | 0.941            | 0.95  | 0.633 |
|                            | DFL5   | 0.719   |                  |       |       |
|                            | DFL7   | 0.805   |                  |       |       |
|                            | DFL8   | 0.870   |                  |       |       |
|                            | DFL9   | 0.762   |                  |       |       |
|                            | DFL10  | 0.858   |                  |       |       |
|                            | DFL11  | 0.711   |                  |       |       |
|                            | DFL15  | 0.827   |                  |       |       |
|                            | DFL16  | 0.812   |                  |       |       |
|                            | DFL17  | 0.829   |                  |       |       |
|                            | DFL18  | 0.816   |                  |       |       |
| Spending Behaviour         | Spend1 | 0.824   | 0.923            | 0.939 | 0.721 |
|                            | Spend2 | 0.845   |                  |       |       |
|                            | Spend3 | 0.854   |                  |       |       |
|                            | Spend4 | 0.862   |                  |       |       |
|                            | Spend5 | 0.857   |                  |       |       |
|                            | Spend6 | 0.852   |                  |       |       |
| Saving Behaviour           | Save1  | 0.879   | 0.916            | 0.941 | 0.799 |
|                            | Save2  | 0.904   |                  |       |       |
|                            | Save3  | 0.898   |                  |       |       |
|                            | Save4  | 0.894   |                  |       |       |
| Financial Well-Being       | FWB1   | 0.823   | 0.937            | 0.948 | 0.694 |
|                            | FWB2   | 0.865   |                  |       |       |
|                            | FWB3   | 0.812   |                  |       |       |

|      |       |
|------|-------|
| FWB4 | 0.878 |
| FWB5 | 0.858 |
| FWB6 | 0.810 |
| FWB7 | 0.809 |
| FWB8 | 0.807 |

### Assessment of Discriminant Validity: HTMT

Discriminant validity for the study, evaluated through the HTMT correlation matrix shown in Table 3, reveals strong positive correlations among the constructs. All values remain below the recommended cut-off of 0.90 (Henseler et al., 2015), indicating adequate discriminant validity and confirming the distinctiveness of the constructs while demonstrating meaningful interrelationships.

**Table 3: Discriminant Validity: HTMT Ratio Statistics**

|                    | DFL   | FWB   | Saving Behaviour | Spending Behaviour |
|--------------------|-------|-------|------------------|--------------------|
| DFL                |       |       |                  |                    |
| FWB                | 0.838 |       |                  |                    |
| Saving Behaviour   | 0.852 | 0.813 |                  |                    |
| Spending Behaviour | 0.731 | 0.656 | 0.703            |                    |

### Assessment of Structural Model

The structural model in PLS-SEM evaluates path coefficients, hypothesized relationships between constructs, standard errors, t-statistics, lateral collinearity (VIF), coefficient of determination ( $R^2$ ), and effect sizes ( $f^2$ ) using bootstrapping with 5,000 resamples based on a sample size of 167 as recommended by Hair et al. (2011).

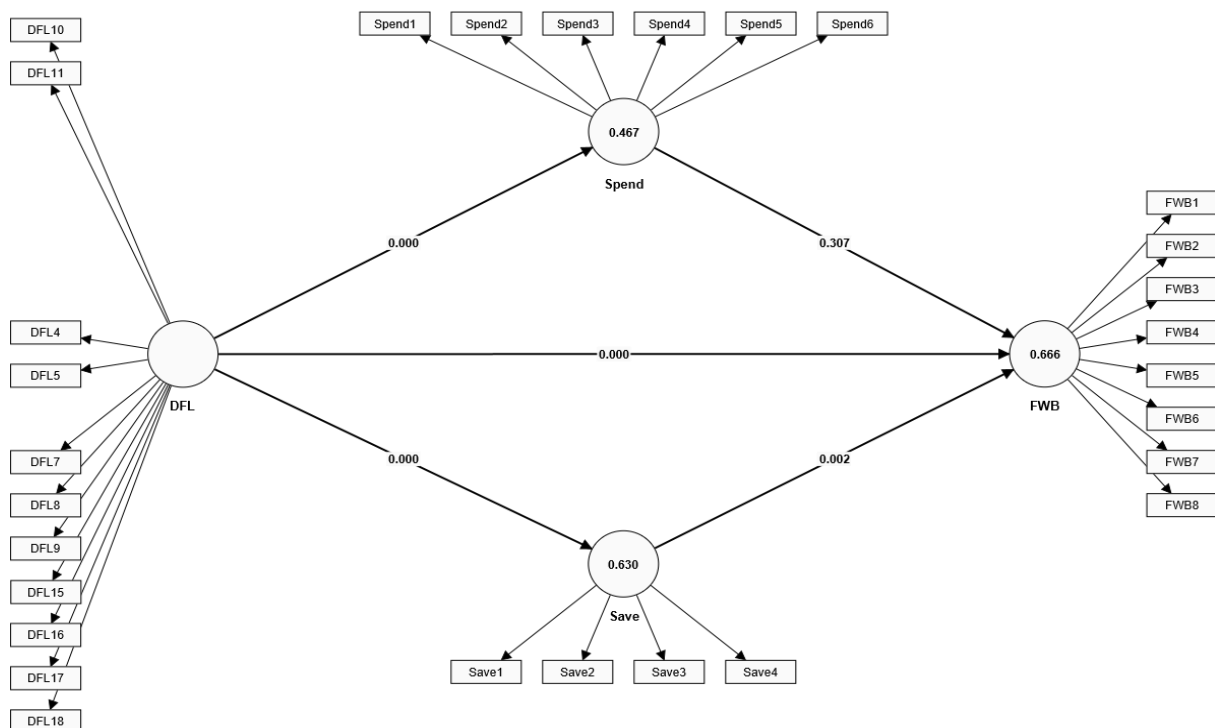
### Direct and Indirect Hypothesis Testing

As shown in Table 4 and Figure 2, the structural model results strongly support most of the hypothesized relationships, emphasizing the pivotal role of DFL in shaping financial behaviours and overall FWB. DFL demonstrated a significant positive influence on both spending behaviour ( $\beta = 0.686$ ,  $t = 10.612$ ,  $p < 0.001$ ) and saving behaviour ( $\beta = 0.795$ ,  $t = 18.476$ ,  $p < 0.001$ ), thereby confirming hypotheses H1 and H2. Moreover, DFL was found to have a direct positive effect on FWB ( $\beta = 0.479$ ,  $t = 4.956$ ,  $p < 0.001$ ), supporting H3. Among the behavioural factors, saving behaviour significantly predicted FWB ( $\beta = 0.329$ ,  $t = 3.134$ ,  $p = 0.002$ ), confirming H4. In contrast, spending behaviour did not exhibit a statistically significant relationship with FWB ( $\beta = 0.073$ ,  $t = 1.023$ ,  $p = 0.307$ ), leading to the rejection of H5.

Regarding mediation effects, the analysis showed that saving behaviour significantly mediated the relationship between DFL and FWB ( $\beta = 0.261$ ,  $t = 3.176$ ,  $p = 0.002$ ), providing support for H6. However, the mediating effect of spending behaviour was not significant ( $\beta = 0.050$ ,  $t = 1.020$ ,  $p = 0.308$ ), resulting in the rejection of H7.

**Table 4: Hypothesis Test Results**

| Hypothesis and Path                  | Beta  | STDEV | t-value | p-value | Lower Level (LL) | Upper Level (UL) | Decision      |
|--------------------------------------|-------|-------|---------|---------|------------------|------------------|---------------|
| <i>Direct Relationship</i>           |       |       |         |         |                  |                  |               |
| H1: DFL -> Spending Behaviour        | 0.686 | 0.065 | 10.612  | 0.000   | 0.541            | 0.795            | Supported     |
| H2: DFL -> Saving Behaviour          | 0.795 | 0.043 | 18.476  | 0.000   | 0.698            | 0.868            | Supported     |
| H3: DFL -> FWB                       | 0.479 | 0.097 | 4.956   | 0.000   | 0.285            | 0.664            | Supported     |
| H4: Spending Behaviour -> FWB        | 0.073 | 0.072 | 1.023   | 0.307   | -0.078           | 0.206            | Not Supported |
| H5: Saving Behaviour -> FWB          | 0.329 | 0.105 | 3.134   | 0.002   | 0.107            | 0.522            | Supported     |
| <i>Indirect Relationship</i>         |       |       |         |         |                  |                  |               |
| H6: DFL -> Spending Behaviour -> FWB | 0.050 | 0.049 | 1.020   | 0.308   | -0.052           | 0.146            | Not Supported |
| H7: DFL -> Saving Behaviour -> FWB   | 0.261 | 0.082 | 3.176   | 0.002   | 0.095            | 0.419            | Supported     |



**Figure 2: Structural Model Results**

### Assessment of Variance Inflation Factor (VIF), Coefficient of Determination ( $R^2$ ), and Effect Size ( $f^2$ )

As summarized in Table 5, the VIF,  $R^2$  and  $f^2$  values offer further insight into the strength and explanatory power of the model's paths. As suggested by Hair et al. (2017), the VIF values are below 5, indicating the absence of multicollinearity among the predictor variables. DFL accounted for 47.0% of the variance in spending behaviour ( $R^2 = 0.470$ ;  $R^2$  adjusted = 0.467), with a large effect size ( $f^2 = 0.888$ ), indicating a strong influence. Similarly, DFL explained

63.2% of the variance in saving behaviour ( $R^2 = 0.632$ ;  $R^2$  adjusted = 0.630), with an even larger effect size ( $f^2 = 1.719$ ), confirming DFL's powerful role in shaping saving habits. DFL also explained 67.2% of the variance in FWB ( $R^2 = 0.672$ ;  $R^2$  adjusted = 0.666), with a medium effect size ( $f^2 = 0.223$ ), suggesting that DFL contributes meaningfully to individuals' FWB. In terms of the mediators, saving behaviour demonstrated a moderate effect on FWB ( $f^2 = 0.114$ ), reinforcing its role as a significant contributor to FWB. In contrast, the effect size of spending behaviour on FWB was minimal ( $f^2 = 0.008$ ), indicating a very weak relationship. This further supports the earlier finding that spending behaviour, although influenced by DFL, does not have a strong or meaningful impact on FWB within the scope of this study.

**Table 5: Coefficient of Determination and Effect Size Results**

| Path                      | VIF   | $R^2$ | $R^2$ adjusted | $f^2$ |
|---------------------------|-------|-------|----------------|-------|
| DFL -> Spending Behaviour | 1.000 | 0.470 | 0.467          | 0.888 |
| DFL -> Saving Behaviour   | 1.000 | 0.632 | 0.630          | 1.719 |
| DFL -> FWB                | 3.139 | 0.672 | 0.666          | 0.223 |
| Spending Behaviour -> FWB | 2.002 |       |                | 0.008 |
| Saving Behaviour -> FWB   | 2.883 |       |                | 0.114 |

## Discussion

The findings bring attention to the pivotal role of DFL in shaping financial behaviours, specifically spending and saving, and in enhancing FWB. DFL was found to significantly influence both spending and saving practices, highlighting its relevance in equipping individuals to navigate the complexities of today's digital financial environment. These results are consistent with prior research by Abdallah et al. (2025), Aryan et al. (2024), Johnson et al. (2023), and Setiawan et al. (2022), all of whom emphasize that strong digital and financial literacy fosters prudent spending and effective saving behaviours. Moreover, the significant direct impact of DFL on FWB reinforces the view that digital financial capability is more than just a functional skill, it is a key driver of long-term financial security. This finding aligns with the conclusions of Sabri et al. (2023) and Setiawan et al. (2022), who similarly identified DFL as a determinant of financial stability and well-being.

Saving behaviour emerged as a key factor in enhancing FWB. Gen Y and Gen Z with higher DFL demonstrated stronger saving habits, which in turn led to greater FWB. This finding aligns with prior studies (Hasler et al., 2023; Sabri et al., 2023; She et al., 2022; Setiawan et al., 2022) showing that disciplined saving practices reduce vulnerability to financial shocks and promote long-term security. In contrast, spending behaviour, although positively influenced by DFL, did not have a significant effect on FWB. These findings contradict those of Aknin et al. (2018), Dali et al. (2023), Van Praag and Frijters (2003), and Zainol et al. (2024). One possible explanation is that not all spending contributes directly to financial satisfaction, individuals may spend on necessities or short-term gratification rather than investments in long-term well-being. Additionally, spending patterns are often shaped by external influences such as inflation, peer pressure, and social media-driven lifestyle expectations, which may weaken the link between DFL and FWB. This challenge is particularly pronounced among Gen Y and Gen Z, who are growing up in a consumer-driven culture where the allure of materialism is stronger than ever. Compared to previous generations, they face greater pressure to spend on trends, experiences, and status symbols, which can lead to higher spending without necessarily enhancing FWB, thus potentially explaining the insignificant effect of spending behaviour in this study.

The mediating role of saving behaviour in the DFL–FWB relationship further emphasizes its significance. Digital literacy appears to foster FWB indirectly by encouraging saving, while



spending did not play a mediating role. These findings reflect the need to differentiate between types of financial behaviours and their relative contributions to overall well-being. One possible reason for the insignificant role of spending is that not all expenditures are aligned with long-term financial goals, much of the spending among younger generations may be reactive, driven by lifestyle trends or social influences. Moreover, while DFL may improve spending awareness, it may not be sufficient to offset the emotional or impulsive drivers of consumption that do not contribute meaningfully to FWB.

## Conclusion

This study highlights the critical role of DFL in enhancing FWB, particularly through its strong influence on saving behaviour. While DFL positively affects both saving and spending, only saving significantly contributes to FWB, with a clear mediating effect. This suggests that disciplined, goal-oriented saving, often supported by digital tools, is where DFL has the most impact. In contrast, spending behaviour is more impulsive and influenced by external pressures like social trends and instant gratification, which may limit DFL's effectiveness in moderating spending. These findings are especially relevant for Generations Y and Z, who face growing economic uncertainty while navigating a fast-paced, consumer-driven digital landscape. Ultimately, DFL emerges as a key enabler of financial resilience, though its full potential may require complementary behavioural strategies to manage spending effectively.

Theoretically, this study contributes to the growing body of literature on financial literacy by distinguishing DFL as a unique and impactful construct in today's financial environment. It extends traditional financial literacy frameworks by highlighting that digital competency is not merely about accessing or using financial technology, but about leveraging it to make informed financial decisions that directly enhance FWB. By identifying the mediating role of saving behaviour in the relationship between DFL and FWB, the study offers a more nuanced understanding of the behavioural mechanisms through which literacy translates into well-being outcomes. Furthermore, focusing on Generations Y and Z provides fresh insights into how digitally engaged but financially vulnerable populations navigate modern financial challenges, thus enriching generational theories in financial behaviour research.

Practically, the findings reinforce the urgent need for targeted financial education programs that emphasize digital literacy alongside traditional financial concepts. Educational institutions, government bodies, and non-governmental organizations (NGOs) can use these insights to design initiatives that not only teach young adults how to manage money but also how to effectively engage with digital financial tools, with an emphasis on cultivating consistent saving habits. Additionally, fintech companies and financial institutions can apply these results by creating platforms that do more than facilitate transactions, they should integrate features that encourage and reward saving behaviour, potentially improving users' financial well-being. Lastly, employers seeking to support younger employees can incorporate DFL-focused modules into financial wellness programs, helping improve financial resilience and overall job satisfaction.

Despite offering valuable insights, this study has several limitations that should be acknowledged. First, the cross-sectional research design restricts the ability to draw causal inferences between DFL, financial behaviours, and FWB. Longitudinal or experimental studies would be more appropriate to establish the direction and stability of these relationships over time. Second, the reliance on self-reported data introduces potential biases, such as social desirability and inaccurate recall, which may affect the validity of the responses. Third, the study sample focused specifically on Generations Y and Z, limiting the generalizability of the

findings to older populations who may have different levels of digital engagement and financial behaviour patterns.

For future research, it is recommended to adopt longitudinal designs to explore how DFL and financial behaviours evolve and interact over time to influence well-being. Expanding the demographic scope to include older age groups and more diverse socioeconomic backgrounds would also provide a more comprehensive understanding of the role of DFL across the population. Additionally, future studies could explore other mediating or moderating variables, such as digital trust, awareness of digital security, financial anxiety, digital confidence, or financial goal setting, to deepen the understanding of how DFL contributes to financial outcomes. Cross-cultural or regional comparisons could further reveal how different economic, technological, or cultural contexts shape the effectiveness and impact of digital financial literacy.

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