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# THE EFFECT OF SPENDING PATTERNS ON THE FINANCIAL WELL-BEING OF MALAYSIAN CONSUMERS ACROSS INCOME LEVELS

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**ABSTRACT**

This study aims to examine the influence of various spending patterns on financial well-being and to explore how these effects differ across income levels in Malaysia. A quantitative research design was employed, involving 308 respondents aged 18 and above who completed a self-administered questionnaire. Concurrently, convenience sampling was used and data were analysed using descriptive statistics and multiple regression analysis via Statistical Package for the Social Sciences (SPSS). The findings reveal that prosocial spending was the most frequently reported, while overall financial well-being among respondents was relatively high. In particular, positive associations were observed between financial well-being and experiential, self-expressive, prosocial, and conspicuous spending. In contrast, compulsive and impulsive spending patterns were linked to lower levels of financial well-being. Meanwhile, income-based analysis suggested that low- and middle-income groups were more affected by harmful spending behaviours compared to their high-income counterparts. Overall, this study contributes to the literature on consumer behaviour and financial well-being by highlighting the differentiated impact of spending types across income groups. Furthermore, the results offer practical implications for policymakers, educators, and financial institutions in designing targeted financial literacy and intervention programmes to foster sustainable financial well-being, especially among vulnerable income groups.



## Introduction

Financial well-being is a vital aspect of overall personal well-being and extends beyond wealth or income (Netemeyer *et al.*, 2017). It reflects an individual's ability to meet financial obligations, feel secure about the future, and make sound financial decisions that contribute to life satisfaction (Sehrawat *et al.*, 2021). Conversely, inadequate financial security can lead to financial stress, anxiety, and emotional distress (Thielen, 2023).

In Malaysia, the government has introduced various initiatives to promote financial resilience. Budget 2021 encouraged prudent spending (Riitsalu & Murakas, 2019), while recent measures include restructuring allocations to achieve savings targets and financing subsidies to support citizens' welfare (Bernama, 2022). In line with this, the Ministry of Finance continues to promote financial awareness through annual reports and educational campaigns (Ministry of Finance Malaysia, 2020; Ilias & A'zmi, 2022).

Despite these efforts, financial vulnerability remains a national concern. Surveys reveal that over half of Malaysians spend as much or more

than they earn, 71% save less than RM500.00 monthly, and 67% have emergency savings lasting three months or less (RinggitPlus, 2023; The Vibes, 2023). Moreover, 61% would struggle to raise RM1,000.00 in an emergency (Malay Mail, 2024; The Star, 2025), and 85% remain unprepared for legacy planning (Malaysia SME, 2025). On a similar note, household debt continues to rise, reaching RM1.63 trillion in mid-2025 (The Edge Malaysia, 2025). Although Malaysia's economy ended 2024 on a strong note, supported by domestic spending (Reuters, 2025), financial literacy challenges persist (The Borneo Post, 2025).

Evidently, these findings highlight a clear gap between financial knowledge and actual behaviour. While literacy levels have improved, issues such as overspending, low savings, and inadequate financial preparedness remain prevalent. Previous studies in Malaysia have explored financial literacy and behaviour (Sabri & Falahati, 2013; Salleh & Rahman, 2023; Ismail *et al.*, 2024) and reported variations in financial well-being across income groups (Mazdhan *et al.*, 2020). Nonetheless, limited research has examined how specific spending patterns influence financial well-being across income classifications (B40, M40, and T20). Addressing this gap, the present study investigates the impact of various spending behaviours on financial well-being among Malaysian income groups.

## Literature Review

### *Concept of Financial Well-being*

Financial well-being has been widely explored across disciplines. According to the Credit Counselling and Debt Management Agency (AKPK, 2018), it encompasses financial resilience, a sense of security, and the ability to meet obligations. In addition, Delafrooz and Paim (2011) described it as evolving from material satisfaction to a broader sense of financial stability and worry-free. It is often measured through individuals' subjective assessments of their financial situation (Joo *et al.*, 2008; Sabri & Falahati, 2013). Still, given its multidimensional nature, no universal definition has been established (AKPK, 2018).

### *Determinants of Financial Well-Being*

Numerous factors influence financial well-being. Oquaye *et al.* (2020) underscored the significance of financial self-efficacy and positive financial behaviours such as budgeting, saving, and debt control. Notably, financial stress has a detrimental impact, particularly among low-income households (Rahman *et al.*, 2020). In Malaysia, financial well-being levels are moderate overall, with substantial variation by income. Correspondingly, low-income groups report the lowest levels, and high-income groups the highest (Mazdhan *et al.*, 2020). Collectively, these patterns underscore the significance of income in shaping resilience, financial behaviour, and decision-making (Chaudhary & Khatoon, 2021; Basu & Swaminathan, 2021).

### *Role of Financial Behaviour*

Financial behaviour plays a central role in determining well-being. For example, She *et al.* (2021) noted that financial behaviour moderates the relationships between locus of control, attitudes, and well-being. Similarly, Thongkrak *et al.* (2021) reported that positive financial activities enhance well-being, while negative financial attitudes can diminish it. At the same time, material hardship and financial challenges are consistently associated with lower well-being (Magli *et al.*, 2021). In contrast, financial literacy and positive behaviour exert stronger influences than self-control (Younas *et al.*, 2019). Together, these findings highlight the importance of spending behaviour as a determinant of financial well-being.

## Theoretical Framework

### *Theory of Planned Behaviour (TPB)*

This study adopts the Theory of Planned Behaviour (TPB) to explain the influence of spending patterns on financial well-being. Accordingly, TPB posits that behaviour is driven by attitudes, subjective norms, and perceived behavioural control. In financial contexts, these components shape spending and saving decisions, which in turn determine well-being outcomes.

### *Type of Spending Patterns*

*Compulsive Spending*

Compulsive spending reflects low behavioural control, in which individuals continue buying despite negative consequences (Edwards, 1993). It is also associated with debt, credit misuse (Aw *et al.*, 2018; Hassan *et al.*, 2018; Zainudin *et al.*, 2019), and anxiety (Owusu *et al.*, 2021). Such behaviour adversely affects financial well-being (Tarka & Kukar-Kinney, 2022).

*Experiential Spending*

Experiential spending focuses on purchases that create memorable life experiences (Van Boven & Gilovich, 2003). It often provides greater and more lasting satisfaction than material purchases (Pelletier & Collier, 2018; Kumar *et al.*, 2020), enhancing autonomy and life satisfaction (Aknin *et al.*, 2018; Tanoto & Evelyn, 2019). However, Ismail *et al.* (2024) discovered no significant relationship among young Malaysian women, suggesting demographic differences.

*Impulsive Spending*

Impulsive spending occurs when immediate desires override financial planning (Badgaiyan *et al.*, 2016). It is linked to materialism, envy (Cui *et al.*, 2021; Lavuri, 2021), and financial distress (Abrantes-Braga & Veludo-de-Oliveira, 2020). The COVID-19 pandemic heightened impulsive tendencies (Naeem, 2021). In Malaysia, impulsive spending has been demonstrated to reduce financial well-being (Salleh & Rahman, 2023; Ismail *et al.*, 2024).

*Self-expressive Spending*

Self-expressive spending aligns consumption with identity (Sirgy *et al.*, 2016). When authentic, it enhances well-being, whereas when status-driven, it undermines financial stability (Goldsmith & Clark, 2012; Zhang *et al.*, 2019). Among Malaysian women, Ismail *et al.* (2024) reported no significant effect, indicating contextual variations.

*Prosocial Spending*

Prosocial spending involves using financial resources to benefit others (Dunn *et al.*, 2014). It is consistently associated with greater well-being (Utama *et al.*, 2021; Lok & Dunn, 2022) and is especially meaningful during crises (Jin *et al.*, 2021). Building on this, Malaysian studies confirm its positive impact on well-being (Salleh & Rahman, 2023; Ismail *et al.*, 2024).

*Conspicuous Spending*

Conspicuous spending or consumption to display wealth and status (Hammerl & Kradischnig, 2018), is often linked to lower well-being due to financial strain (Lee & Mori, 2019; Ngamaba *et al.*, 2020). Despite this, Salleh and Rahman (2023) observed a positive effect among Muslim consumers, reflecting cultural or religious nuances.

### *Spending Pattern Across Income Level*

While previous studies often treat income as a moderator, this study categorises consumers into income classes (low, middle, and high) to

examine how spending patterns differentially affect financial well-being. In addition, recent studies have highlighted that spending patterns can influence financial well-being differently across income levels.

Kolibu *et al.* (2018) discovered that individuals in Manado exhibit impulsive or compulsive buying behaviours influenced by factors such as power, prestige, distrust, anxiety, and demographic variables such as age, education, occupation, and income. This suggests that the impact of compulsive spending on financial well-being may vary across income groups.

Furthermore, Latimaha *et al.* (2019) observed that low- and middle-income individuals tend to prioritise tangible items such as homes and vehicles. In contrast, higher-income consumers are more inclined to spend on experiences such as travel and dining out. This implies that the effect of experiential spending on financial well-being may differ across income levels.

Additionally, Desai (2020) noted that consumers with limited budgets often focus on necessities, reducing the likelihood of impulsive purchases. Conversely, Fenton-O'Creevy and Furnham (2019) argued that higher-income individuals might be more susceptible to impulsive spending, potentially impacting their financial well-being differently than lower-income individuals.

Moreover, Fan *et al.* (2020) highlighted that lower-income individuals may have limited discretionary income, affecting their ability to engage in self-expressive purchases. By contrast, higher-income individuals have more financial freedom to indulge in such spending, which could influence their financial well-being.

Research indicates that lower-income individuals may face financial constraints that limit their capacity for charitable giving. Nevertheless, studies have presented that prosocial spending is positively associated with financial well-being, suggesting that even modest contributions can enhance well-being.

Consistent with this, Zhang and Chen (2022) cautioned that lower-income individuals attempting to emulate wealthier peers may experience financial strain. Meanwhile, Oh (2021) noted that high-income individuals engaging in conspicuous spending might face social pressure to maintain appearances, which could also affect their financial well-being.

**Research Hypothesis**

H1: Compulsive spending significantly affects Malaysian consumers' financial well-being.

H2: Experiential spending significantly affects Malaysian consumers' financial well-being.

H3: Impulsive spending significantly affects Malaysian consumers' financial well-being.

H4: Self-expressive spending significantly affects Malaysian consumers' financial well-being.

H5: Prosocial spending significantly affects Malaysian consumers' financial well-being.

H6: Conspicuous spending significantly affects Malaysian consumers' financial well-being.

H7: The effect of compulsive spending on Malaysian consumers' financial well-being differs across income levels (low, middle, and high).

H8: The effect of experiential spending on Malaysian consumers' financial well-being differs across income levels (low, middle, and high).

H9: The effect of impulsive spending on Malaysian consumers' financial well-being differs across income levels (low, middle, and high).

H10: The effect of self-expressive spending on Malaysian consumers' financial well-being

differs across income levels (low, middle, and high).

H11: The effect of prosocial spending on Malaysian consumers' financial well-being differs across income levels (low, middle, and high).

H12: The effect of conspicuous spending on Malaysian consumers' financial well-being differs across income levels (low, middle, and high).

## Research Methodology

### *Research Design*

This study employed a quantitative research design. A total of 385 consumers aged 18 and above were selected through a convenience sampling method. Accordingly, data were gathered using a structured questionnaire, with all items derived from established studies and evaluated on a seven-point Likert scale (1 = Strongly disagree to 7 = Strongly agree). The study also employed a non-probability sampling technique, specifically convenience sampling, as it is cost-effective and the participants were easily accessible (Alvi, 2016).

### *Population and Sampling*

Constructing a complete sampling frame of all Malaysian consumers is nearly impossible, which makes simple random sampling unfeasible. Note that convenience sampling, when applied to a sufficiently large sample, can approximate population characteristics, making it useful for inferential analysis.

Berk (2009) highlighted that large convenience samples can reduce bias and support reliable parametric analysis if they represent key population traits. Similarly, Etikan *et al.* (2016) argued that convenience sampling can yield valid results if its limitations are acknowledged and steps are taken to ensure population traits are reflected.

However, convenience sampling may increase systematic error and sampling bias (Alvi, 2016). To minimise this, several steps were taken. Skowronek and Duerr (2009) emphasised the importance of reducing selection bias and monitoring representativeness, which this research applied by ensuring the sample reflects the gender, race, and income levels of the Malaysian population. Furthermore, Patten and Galvan (2019) stressed that diversity strengthens convenience samples. In this study, participants were recruited through multiple platforms such as email, WhatsApp, and Telegram to increase diversity. Another strategy to reduce bias is using larger sample sizes, since larger samples improve reliability (Skowronek & Duerr, 2009).

### *Respondents' Profile*

A total of 385 valid responses were collected. The demographic characteristics of the respondents are summarised in Table 1. The results indicate that 52% were female and 48% were male, indicating a relatively balanced gender distribution. In terms of age, most respondents (45%) were between 26 and 35 years old, followed by 36 to 45 years (27%), 18 to 25 years (18%), and 46 years and above (10%). Regarding ethnicity, Malay respondents accounted for 67%, Chinese 20%, Indian 10%, and others 3%, reflecting Malaysia's multicultural society.

In terms of educational background, 58% of respondents held a diploma or bachelor's degree, 27% had secondary education, and 15% possessed postgraduate qualifications. Based on income classification, 41% of respondents fell under the B40 (lower-income) group, 46% under M40 (middle-income), and 13% under T20 (high-income). In general, this diversity ensures that the data adequately represent consumers from various socioeconomic backgrounds.

Table 1: Respondent demography

| Sociodemographic | | Frequency (n) | Percent (%) |
|---|---|---|---|
| Gender | Male | 126 | 40.9 |
| | Female | 182 | 59.1 |
| Ethnicity | Malay | 273 | 88.6 |
| | Chinese | 7 | 2.3 |
| | Indian | 23 | 7.5 |
| | Native | 2 | 0.6 |
| | Others | 3 | 0.9 |
| Marital status | Married | 289 | 93.8 |
| | Single | 15 | 4.9 |
| | Divorce | 2 | 0.6 |
| | Single parent | 2 | 0.6 |
| Religion | Islam | 281 | 91.2 |
| | Hindu | 18 | 5.8 |
| | Buddha | 7 | 2.3 |
| | Christians | 2 | 0.6 |
| Education level | Doctorate | 24 | 7.8 |
| | Master's degree | 50 | 16.2 |
| | Bachelor's degree | 100 | 32.5 |
| | Diploma | 87 | 28.2 |
| | SKM | 7 | 2.3 |
| | STPM | 2 | 0.6 |
| | SPM | 36 | 11.7 |
| | PMR | 2 | 0.6 |
| Occupation | Self-employed | 25 | 8.1 |
| | Business owner | 17 | 5.5 |
| | Student | 10 | 3.2 |
| | Retired | 8 | 2.6 |
| | Public sector | 155 | 50.3 |
| | Private sector | 83 | 26.9 |
| | Housewife | 10 | 3.2 |
| Income level | Low-income | 123 | 40 |
| | Middle-income | 123 | 40 |
| | High-income | 62 | 20 |

### *Instrument Development*

Questionnaire items utilised to measure the variables in this study were adapted from previous studies. There are 66 items in total that were selected, adapted, and translated into Malay. Of which, six questions adapted for the assessment of compulsive spending were drawn upon the studies conducted by Maccarrone-Eaglen Schofield (2018) and Xu *et al.* (2020). Meanwhile, seven items for the measurement of the experience spending were modified from studies by Pelletier and Collier (2018) and Howell *et al.* (2012).

For impulsive spending, a total of nine items were adapted from the research by Badgaiyan *et al.* (2016) as well as Verplanken and Herabadi (2001). For self-expressive spending, a total of 11 items have been developed, and these items were taken from the research by Sirgy *et al.*

(2016) and Ekici *et al.* (2018). In addition, to measure prosocial spending, a total of seven items have been adapted from past research conducted by Yamaguchi *et al.* (2016) and Ekici *et al.* (2018). Moreover, the last spending pattern is conspicuous spending, and a total of seven items were adapted from the research by Flynn *et al.* (2016) and Thoumrungroje (2018). Following this, a total of 17 items for measuring financial well-being have been developed from prior research by Chan *et al.* (2018), Netemeyer *et al.* (2017), Strömbäck *et al.* (2017), Credit Counselling and Debt Management Agency (CCADM, 2018), and Chan *et al.* (2018).

### *Pilot Testing, Reliability, and Validity*

Prior to data collection, the questionnaire's reliability and validity were assessed in two pilot phases.

- Phase 1 (Expert Review): Three experts (two academics and one marketing professional) evaluated the questionnaire for content relevance, representativeness, and language clarity (Jamil, 2019). Feedback was used to refine and improve the items.
- Phase 2 (Pilot Survey): The revised questionnaire was distributed to 100 prospective respondents to assess reliability and readability.

Notably, reliability and validity tests are essential components of every thorough research study since they ensure the quality and accuracy of research measurements (Taherdoost, 2016). Additionally, Cronbach's alpha reliability testing was utilised in this study to assess item reliability. At the same time, item-to-total correlation analysis and expert review were employed to assess item construct and content validity. Table 2 outlines the reliability test using Cronbach's alpha.

Table 2: Reliability test using Cronbach's alpha

| Item | Frequency | Cronbach's Alpha |
|---|---|---|
| Financial well-being | 18 | 0.970 |
| Compulsive spending | 6 | 0.796 |
| Experiential spending | 7 | 0.920 |
| Impulsive spending | 9 | 0.838 |
| Self-expressive spending | 12 | 0.949 |
| Prosocial spending | 7 | 0.898 |
| Conspicuous spending | 7 | 0.857 |

### *Content Validity by Expert Review*

Pilot testing with specialists is performed expressly to evaluate and enhance the questionnaire's content and discriminant validity. Subsequently, the questions were reviewed by the experts based on the operational definitions of each concept, with a focus on the relevance and representativeness of the items, as well as the clarity of the language. Following item modification, the new questionnaire was forwarded to specialists for reevaluation. Once the expert has approved the questionnaire's content, it is ready to be evaluated with potential respondents. Based on the experts' feedback, all the items can accurately measure what they are supposed to measure. Hence, the questionnaire was administered to respondents for pilot testing.

### *Construct Validity by Item to Total Analysis*

Item-total correlation is a common approach for determining the validity of a test or scale. The link between individual items on a test or scale and the total score of all items on the same test or scale is assessed using item-total correlation

(Tapsir *et al.*, 2018). Interestingly, all items significantly correlated with their corresponding variables, with r values above ± 0.5. It is apparent that all items are measuring what they are intended to measure and are applicable for use in this study.

## Data Collection

Data collection involves systematically gathering information to answer research questions and test hypotheses (Totten *et al.*, 2020; Mazhar, 2021). Due to the pandemic, an online questionnaire was distributed via WhatsApp, Telegram, and email. Online surveys are cost-effective, scalable, fast, eco-friendly, and improve respondent honesty and anonymity while reducing social desirability bias (Griffis *et al.*, 2003; Murdoch *et al.*, 2014; Mudavath & Narayan, 2019; Bergen & Labonte, 2020; Goa *et al.*, 2021; Muhammad, 2021; Fei *et al.*, 2022).

Ethical measures were ensured: While participation was voluntary, data were kept confidential, and respondents were briefed to minimise discomfort (Greener, 2008; Saunders *et al.*, 2009; Sekaran & Bougie, 2009; Bhattacherjee, 2012). Using convenience sampling, the questionnaire was distributed until 385 eligible respondents (over 18 with income) were reached. Correspondingly, responses were recorded in Google Sheets, reviewed for validity, and participants who did not meet the criteria were excluded. In particular, data collection took place from February 12 to June 12, 2023.

## Data Analysis

Data analysis involves cleaning, organising, and modelling data to extract meaningful insights for decision-making (Taherdoost, 2020). Notably, three statistical techniques were employed to address the study's objectives: descriptive analysis, multiple regression analysis, and comparative analysis.

### *Descriptive Analysis*

Descriptive statistics were conducted using Statistical Package for the Social Sciences (SPSS) version 21 to summarise respondents' demographic characteristics (gender, age, ethnicity, marital status, education, employment, and income). At the same time, frequency, percentage, mean, and standard deviation were used to describe respondents' profiles and assess the levels of spending patterns and financial well-being (Zikmund & Babin, 2006; Huck, 2012). Furthermore, the mean score classification on a 7-point Likert scale determined spending and well-being levels: 1 to 2.333 (low), 2.334 to 4.666 (moderate), and 4.667 to 7.000 (high) (Chamacho *et al.*, 2023).

### *Multiple Regression Analysis*

Multiple regression analysis examined the effect of spending patterns on financial well-being. This technique evaluates how multiple independent variables (spending patterns) predict a dependent variable (financial well-being) (Weisburd *et al.*, 2022). Building on this, the $R^2$, F-test, *p*-value, and standardised beta were utilised to determine model fit, significance, and direction of relationships (Ali & Younas, 2021; Ozili, 2022).

Assumption tests, including normality, linearity, independence, homoscedasticity, and multicollinearity were performed to ensure model validity (Osborne & Waters, 2019; Gio & Caraka, 2019). Overall, all assumptions were met, confirming the suitability of multiple regression for analysis.

### *Comparative Analysis*

Comparative analysis assessed whether the effects of spending patterns on financial well-being differ across income levels (low, middle, and high). As such, income groups were classified based on the B40-M40-T20

framework (DOSM, 2021). Subsequently, separate regression analyses were conducted for each income group, and the results were compared to identify variations in the strength and significance of relationships (Coccia & Benati, 2018).

## Results and Discussions

### *Descriptive Analysis of Spending Patterns and Financial Well-being*

To explore the financial behaviours of Malaysian consumers, a descriptive analysis was conducted focusing on six types of spending: Compulsive, experiential, impulsive, self-expressive, prosocial, and conspicuous. The assessment also included an evaluation of participants' financial well-being. The outcomes are detailed in Table 3.

Each variable was measured using a seven-point Likert scale. Mean values were categorised into three levels to facilitate interpretation: Low (1.000 to 2.333), moderate (2.334 to 4.666), and high (4.667 to 7.000). Essentially, these categories were created by dividing the scale range into three equal intervals. In addition, standard deviations were used to assess the extent of variability in responses relative to the mean.

According to Table 3, most spending patterns were rated at a moderate level, with mean scores falling between 2.334 and 4.666. The exception was prosocial spending, which suggested a high level of occurrence, with a mean score of 4.9652. Experiential spending followed, recording a mean of 4.3752, while conspicuous spending had a mean of 4.0918. In comparison, compulsive spending recorded a mean score of 3.8371, and self-expressive spending followed with 3.5460. The lowest mean was observed in impulsive spending, which scored 3.1154.

In terms of financial well-being, respondents reported a high level of perceived financial security, as reflected by a mean value of 4.8562. This implies that the majority of participants felt confident with regard to their current financial status.

Table 3: Descriptive analysis for spending patterns and financial well-being

| | N | Minimum | Maximum | Mean | Std. Deviation | Level of Spending |
|---|---|---|---|---|---|---|
| Compulsive spending | 308 | 1.00 | 7.00 | 3.8371 | 1.20196 | Moderate |
| Experiential spending | 308 | 1.00 | 7.00 | 4.3752 | 1.39257 | Moderate |
| Impulsive spending | 308 | 1.00 | 7.00 | 3.1154 | 1.23226 | Moderate |
| Self-expressive spending | 308 | 1.00 | 7.00 | 3.5460 | 1.37159 | Moderate |
| Prosocial spending | 308 | 1.43 | 7.00 | 4.9652 | 1.17432 | High |
| Conspicuous spending | 308 | 1.00 | 7.00 | 4.0918 | 1.39215 | Moderate |
| Financial well-being | 308 | 1.44 | 7.00 | 4.8562 | 1.19448 | High |

Note: Level determined by mean values (low: 1.00 to 2.33; moderate: 2.34 to 4.66; high: 4.67 to 7.00).

### *Descriptive Analysis of Spending Pattern Level Across Income Groups*

There is a slight variation in financial well-being across different income groups (Figure 1). Respondents from both high- and middle-income brackets reported a high level of financial well-being, whereas those from the low-income group reported a moderate level. Regarding spending patterns, all income groups demonstrated similar levels across the six spending types (compulsive, experiential, impulsive, self-expressive, prosocial, and conspicuous), with only minor differences in mean values observed.

For the low-income group, nearly all spending behaviours were recorded at a moderate level, except prosocial spending, which was rated at a high level, with a mean score of 4.8455. Specifically, the mean scores for this group were: Experiential spending (4.3926), conspicuous spending (4.1812), compulsive spending (3.9770), self-expressive spending (3.6741), and impulsive spending (3.3532).

In the middle-income group, all spending categories also fell within the moderate range, apart from prosocial spending, which was similarly reported at a high level (M = 4.9593). The other mean values for this group were: Experiential spending (4.2962), conspicuous spending (4.1394), compulsive spending (3.7764), self-expressive spending (3.4871), and impulsive spending (3.0298).

Likewise, for the high-income group, prosocial spending was the only category at a high level, with a mean value of 5.2143. All other spending behaviours were recorded at a moderate level: Compulsive spending (3.6801), experiential spending (4.4977), self-expressive spending (3.4086), conspicuous spending (3.8203), and impulsive spending (2.8136).

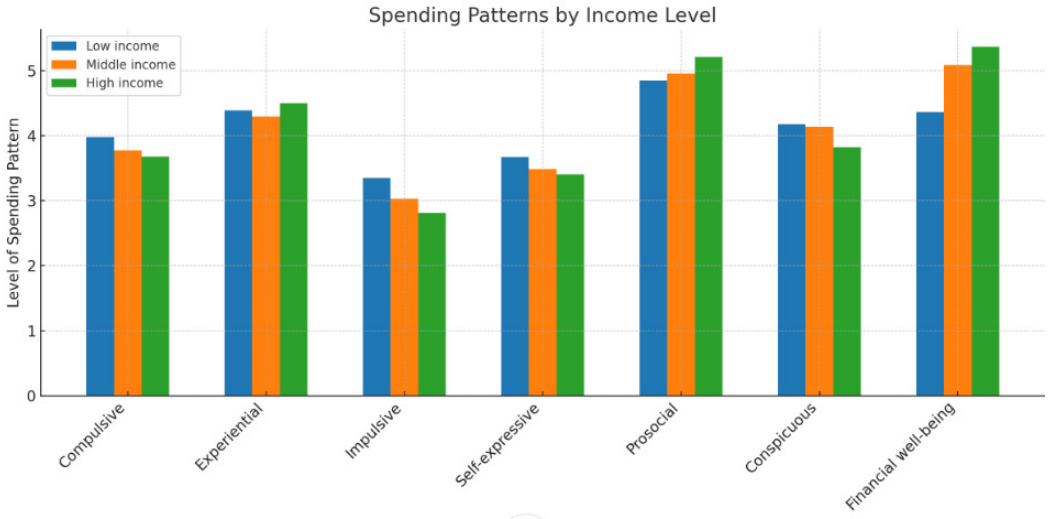



Figure 1: Level of spending pattern across income levels

### *Multiple Regression Analysis of Spending Patterns' Effect on Financial Well-being*

A multiple regression analysis was conducted to examine the influence of various spending patterns (compulsive, experiential, impulsive, self-expressive, prosocial, and conspicuous) on the financial well-being of Malaysian consumers. Prior to conducting multiple regression analysis, several statistical assumptions were examined to ensure the validity and reliability of the results. Thus, meeting these assumptions is essential to confirm that the relationships observed between the independent and dependent variables are not distorted by violations such as multicollinearity, heteroscedasticity, or non-normality.

### *Assumption Tests for Multiple Regression Analysis*

*Independence of Residuals*

Observations should be independent. Based on Table 4, the Durbin-Watson statistic was 1.867, which falls within the acceptable range of 0 to 4, indicating no issue with residual independence (Turner, 2019).

Table 4: The independence residual results

| Model | R | R Square | Adjusted R-Square | Std. Error of the Estimate | Change Statistics | | | | | Durbin-Watson |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | R Square Change | F Change | df1 | df2 | Sig. F Change | |
| 1 | 0.360[a] | 0.130 | 0.112 | 1.12546 | 0.130 | 7.467 | 6 | 301 | 0.000 | 1.867 |

*Homoscedasticity*

Residuals should have constant variance. The plot of standardised residuals versus predicted values presented a random spread, confirming homoscedasticity (Figure 2).

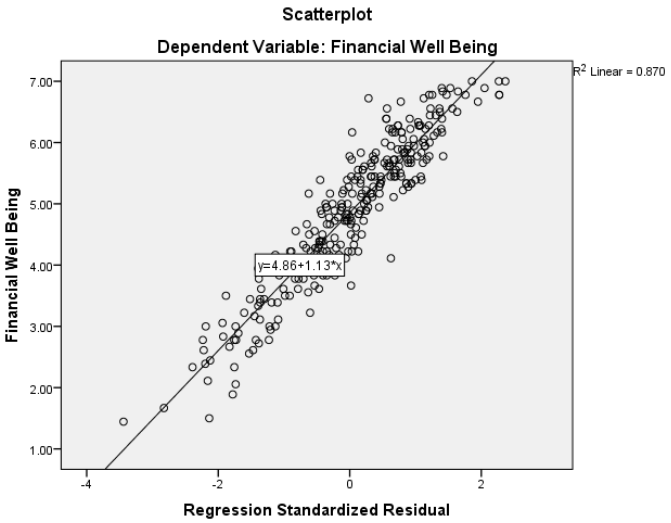
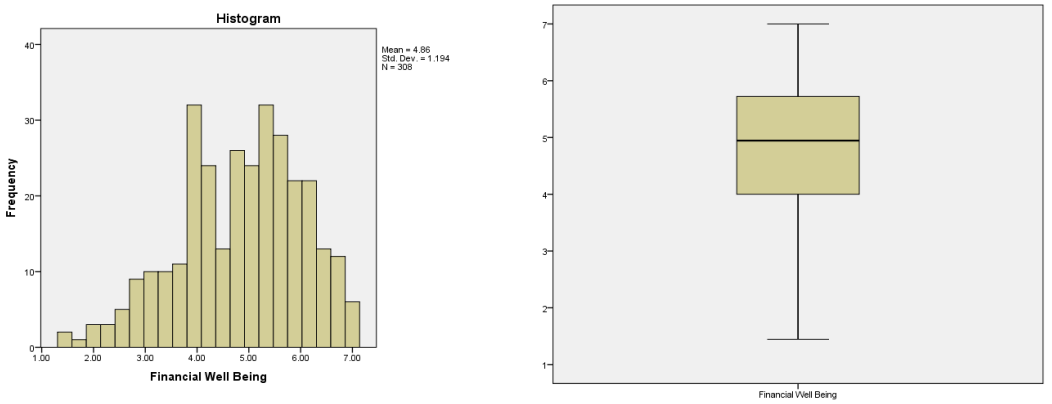



Figure 2: Plot of standardised residuals versus predicted values

*Outliers*

Outliers are values that deviate abnormally. Boxplot and histogram analysis exhibited no outliers in the dataset (Figure 3).




(a) (b)

Figure 3: Boxplot and histogram analysis

*Linearity*

The relationship between dependent and independent variables should be linear. The P-P plot demonstrated data points following the diagonal line, confirming linearity (Figure 4).

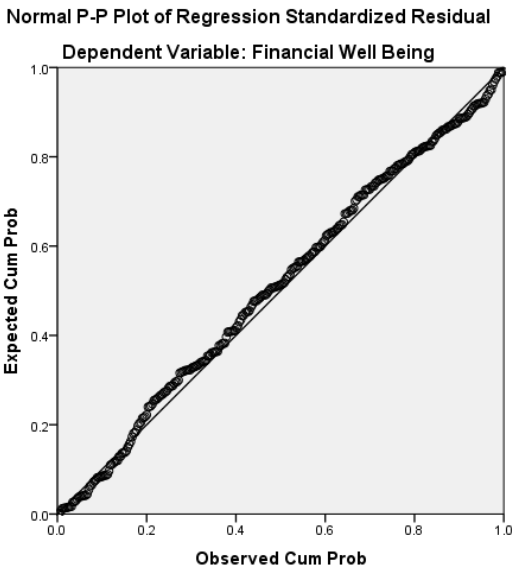



Figure 4: Normal P-Plot of regression standardised residual

*Normality*

Residuals should follow a normal distribution. Based on Figure 5, the histogram illustrated a bell-shaped curve, indicating normality (Rani Das, 2016).

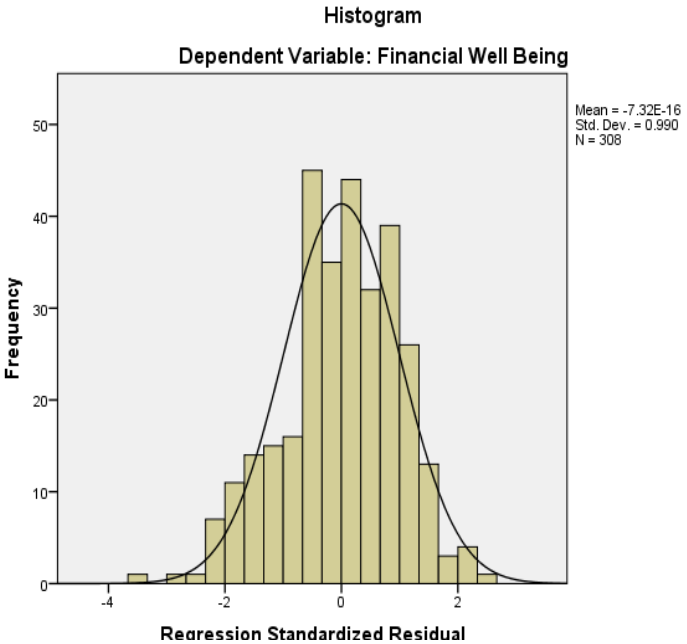



Figure 5: Histogram of normality

*Multicollinearity*

Independent variables should not be highly correlated. Based on Table 5, tolerance values were all above 0.2, and Variance Inflation Factor (VIF) values were below 10, confirming no multicollinearity problem (Vörösmarty & Dobos, 2020).

Table 5: The VIF and tolerance values

| Model | Collinearity Statistics | |
|---|---|---|
| | Tolerance | VIF |
| Compulsive spending | 0.384 | 2.603 |
| Experiential spending | 0.523 | 1.912 |
| Impulsive spending | 0.370 | 2.705 |
| Self-expressive spending | 0.303 | 3.296 |
| Prosocial spending | 0.713 | 1.402 |
| Conspicuous spending | 0.691 | 1.447 |

Note: VIF = Variance inflation factor.

In summary, all assumptions for regression analysis were met: Independence, homoscedasticity, no outliers, linearity, normality, and no multicollinearity.

### *Multiple Regression Analysis*

A multiple regression analysis was conducted to examine the influence of various spending patterns (compulsive, experiential, impulsive, self-expressive, prosocial, and conspicuous) on the financial well-being of Malaysian consumers. In this analysis, the *p*-value was assessed to determine the statistical significance of the model. At the same time, the $R^2$ value was used to evaluate how much variance in financial well-being could be accounted for by the set of independent variables.

The results from the model summary in Table 6 indicate that the $R^2$ value is 0.130, which suggests that approximately 13% of the variability in financial well-being can be explained by the different types of spending behaviours included in the model. This implies a modest but meaningful relationship between consumer spending patterns and financial well-being.

This relatively modest value is expected, as financial well-being is influenced by a wide range of factors beyond spending, including income, savings, debt management, financial literacy, and psychological characteristics (Brüggen *et al.*, 2017). Moreover, modest $R^2$ values are common in social and behavioural science research, where human attitudes and behaviours are shaped by multiple complex variables. On a similar note, Falk and Miller (1992) suggested that even $R^2$ values above 0.10 are considered acceptable, given the multifaceted nature of social phenomena.

Table 6: Model summary

| Model | R | R Square | Adjust R Square | Std. Error of the Estimate |
|---|---|---|---|---|
| 1 | .360[a] | .130 | .112 | 1.12546 |

From Table 7, the importance of a variable is evaluated using the F-statistic and its corresponding *p*-value. A relatively large F-value implies that there is substantial variation between groups compared to within groups. In this analysis, the F-statistic is 7.467, which suggests a strong effect, and the *p*-value is 0.000. This indicates that the likelihood of obtaining such a result by chance is less than 0.1%, confirming that the result is highly statistically significant ($p < 0.001$).

Table 7: ANOVA results

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | 56.753 | 6 | 9.459 | 7.467 | 0.000*** |
| | Residual | 381.267 | 301 | 1.267 | | |
| | Total | 438.020 | 307 | | | |

Note: $p < 0.1$*, $p < 0.05$**, and $p < 0.01$***.

Table 8 presents the impact of different spending patterns on financial well-being. It identifies which variables have a statistically significant effect and whether that effect is positive or negative. The results indicate that all six spending patterns significantly affect financial well-being: compulsive spending ($p$ = 0.001), experiential spending ($p$ = 0.028), impulsive spending ($p$ = 0.004), self-expressive spending ($p$ = 0.003), prosocial spending ($p$ = 0.048), and conspicuous spending ($p$ = 0.028). Since all $p$-values are below 0.05, the effects are considered statistically significant.

The table also reveals the direction of these effects. Accordingly, experiential spending (β = 0.164), self-expressive spending (β = 0.296), prosocial spending (β = 0.126), and conspicuous spending (β = 0.143) present a positive effect on financial well-being. In contrast, compulsive spending (β = -0.290) and impulsive spending (β = -0.255) exhibit a negative effect. Thus, all effects are significant at the $p < 0.05$ level.

Table 8: Effect of spending pattern on financial well-being

| Model | Unstandardised Coefficients | Standardised Coefficients | Beta | t | Sig. |
|---|---|---|---|---|---|
| | B | Std. Error | | | |
| (Constant) | 4.064 | 0.312 | | 13.032 | 0.000*** |
| Compulsive spending | -0.288 | 0.086 | -0.290 | -3.343 | 0.001*** |
| Expriential spending | 0.141 | 0.064 | 0.164 | 2.207 | 0.028** |
| Impulsive spending | -0.247 | 0.086 | -0.255 | -2.883 | 0.004** |
| Self-expressive spending | 0.258 | 0.085 | 0.296 | 3.029 | 0.003** |
| Prosocial spending | 0.128 | 0.065 | 0.126 | 1.984 | 0.048** |
| Conspicuous spending | 0.122 | 0.056 | 0.143 | 2.206 | 0.028** |

Note: $p < 0.1$, $p < 0.005$**, $p < 0.01$***.

### *Comparative Analysis of Spending Patterns' Effect on Financial Well-being Across Income Levels*

According to the model summary (Table 9), the $R^2$ values vary across income levels. For the low-income group, the $R^2$ is 0.115, indicating that 11.5% of the variance in financial well-being is explained by spending patterns. Meanwhile, the middle-income group yields a higher $R^2$ of 0.169, while the high-income group has the highest $R^2$ at 0.187. Despite the high-income group having the highest $R^2$ value, the middle-income group demonstrates a stronger and more balanced relationship in this model. This suggests that it may serve as a more reliable predictor of financial well-being based on spending behaviour.

Table 9: Model summary

| Income Level | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|---|---|---|---|---|
| Low-income | 0.340[a] | 0.115 | 0.070 | 1.19782 |
| Middle-income | 0.411[a] | 0.169 | 0.126 | 0.93690 |
| High-income | 0.433[a] | 0.187 | 0.099 | 1.05090 |

The Analysis of Variance (ANOVA) results indicate that the effect of income level on the relationship between spending patterns and financial well-being varies across groups (Table 10). For the middle-income group, the model is statistically significant, with an F-value of 3.939 and a *p*-value of 0.001 ($p < 0.01$). Similarly, the low-income group also demonstrates a statistically significant result, with an F-value of 2.520 and a *p*-value of 0.025 ($p < 0.05$). In contrast, the high-income group yields an F-value of 2.113 and a *p*-value of 0.066, suggesting a marginal level of significance ($p < 0.10$). Overall, the ANOVA results (Table 10) support that the model is significant for both middle- and low-income groups, while the high-income group results in a weaker yet still potentially meaningful effect.

Table 10: ANOVA results

| Income Level | Model | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| Low-income | Regression | 21.696 | 6 | 3.616 | 2.520 | 0.025** |
| | Residual | 166.434 | 116 | 1.435 | | |
| | Total | 188.130 | 122 | | | |
| Middle-income | Regression | 20.744 | 6 | 3.457 | 3.939 | 0.001*** |
| | Residual | 101.823 | 116 | 0.878 | | |
| | Total | 122.567 | 122 | | | |
| High-income | Regression | 14.000 | 6 | 2.333 | 2.113 | 0.066* |
| | Residual | 60.741 | 55 | 1.104 | | |
| | Total | 74.741 | 60 | | | |

Note: $p < 0.1$, $p < 0.05$**, and $p < 0.01$***.

Figure 6 presents the effect of each spending pattern on financial well-being across income levels, with the aim of assessing whether the influence of spending behaviour differs depending on income group.

For compulsive spending, both the low-income and middle-income groups demonstrate a significant negative effect of compulsive spending on financial well-being. Notably, the middle-income group demonstrates slightly stronger significance ($p = 0.017$, $p < 0.05$) compared to the low-income group ($p = 0.021$, $p < 0.10$). In contrast, the high-income group reports a non-significant effect ($p = 0.499$, $p > 0.10$). These findings suggest that compulsive spending undermines financial well-being among individuals in the low- and middle-income categories but does not significantly affect those with higher incomes. Prior research supports this, noting that low-income individuals often face debt, stress, and social withdrawal due to limited financial resources (Acthziger, 2022; Mansor *et al.*, 2022). However, middle-income earners experience disrupted savings and long-term financial instability through credit misuse (Jayashanka & Murphy, 2013; Sensenig, 2021). Although high-income individuals are more financially insulated, compulsive spending still poses risks of eroding long-term wealth accumulation (Ryu & Fan, 2023; Wang & Zhai, 2022).

For experiential spending, a significant positive effect is observed only in the low-income group ($p = 0.017$, $p < 0.10$). In contrast, both the middle-income ($p = 0.585$, $p > 0.10$) and high-income groups ($p = 0.680$, $p > 0.10$) report non-significant outcomes. This indicates that experiential spending enhances financial

well-being for individuals with lower income, though it does not significantly influence higher income groups. Consistent with earlier studies, low-income individuals benefit from affordable leisure and community activities that boost life satisfaction (Jachimowicz *et al.*, 2020; Puhakka, 2021). For middle-income individuals, the effect is weaker since they can balance both material and experiential purchases (Sawhill & Guyot, 2022). Conversely, high-income individuals experience minimal additional benefit, as gains in well-being from experiential spending tend to plateau with financial security (Killingworth, 2021; Baumann & Ruch, 2022).

A moderate negative effect is detected only among the high-income group ($p = 0.072$, $p < 0.10$). As such, the low-income ($p = 0.346$) and middle-income groups ($p = 0.173$) demonstrate non-significant effects. This suggests that impulsive spending is more detrimental to financial well-being among high-income individuals, who are more vulnerable due to greater credit access and lifestyle expectations (Fenton-O'Creevy & Furnham, 2019; Fernández-López *et al.*, 2023). By contrast, limited financial resources and stronger financial awareness act as natural restraints for low- and middle-income groups, reducing the impact of impulsive spending (Duffett & Foster, 2018; Valaskova *et al.*, 2021).

Both low-income and middle-income groups report a significant positive effect of self-expressive spending on financial well-being, while the high-income group demonstrates a non-significant result. These findings suggest that self-expressive spending enhances well-being for lower and middle earners by supporting identity and emotional satisfaction without imposing major financial strain (Sirgy *et al.*, 2016; Sweeny & Schaefer, 2022). For high-income groups, on the other hand, the effect is negligible, as financial stability reduces the influence of such discretionary spending (Baumann & Ruch, 2022; Hirschman & Holbrook, 2022).

Across all income levels (low, middle, and high), prosocial spending indicates non-significant effects on financial well-being. This suggests that prosocial spending may not directly influence financial well-being when analysed separately by income category. Nonetheless, prior studies indicate that prosocial spending can provide emotional rewards and subjective well-being benefits when assessed collectively across populations (Lok & Dunn, 2022; Chen, 2023). At the same time, the lack of significance in subgroup analyses may reflect sample variation and differing motivations for prosocial behaviours (Brysbaert, 2019; Olson *et al.*, 2021).

Both the middle-income ($p = 0.048$, $p < 0.05$) and high-income groups ($p = 0.028$, $p < 0.05$) report significant positive effects of conspicuous spending on financial well-being, while the low-income group reports a non-significant result. This indicates that conspicuous spending may enhance financial well-being for middle- and high-income individuals by strengthening social status and identity (Wang *et al.*, 2022; Li *et al.*, 2023). Still, for low-income groups, conspicuous consumption often results in negative outcomes such as debt and financial insecurity when pursued beyond their means (Lee & Mori, 2019; Banuri & Nguyen, 2022).

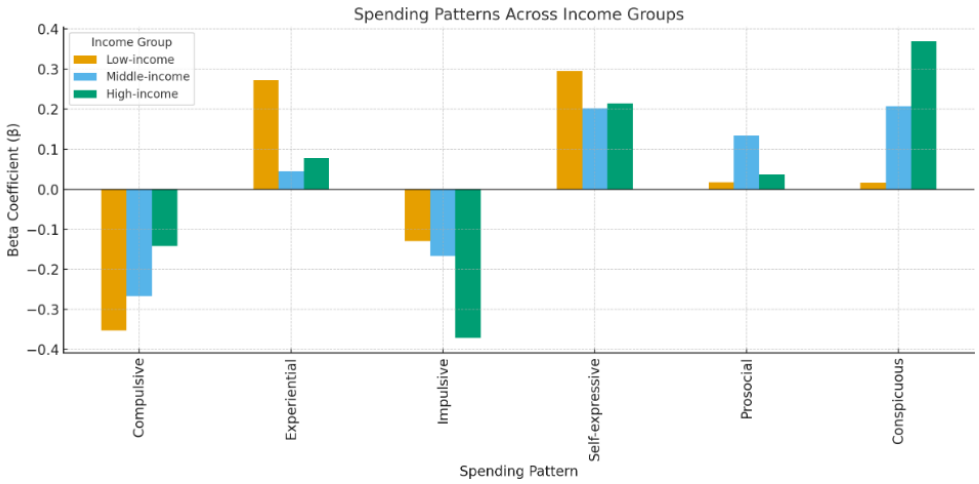



Figure 6: The effect of spending patterns on financial well-being across income levels

## Discussions

### *Financial Well-being Across Income Groups*

This research finding reveals that the level of financial well-being differs across low-income, middle-income, and high-income groups. In particular, the low-income group reported a moderate level of financial well-being, while both middle-income and high-income groups demonstrated a high level of financial well-being. These findings are also supported by past studies, which indicated that individuals with low incomes are more likely to face financial well-being crises compared to those with higher incomes (Ryu & Fan, 2022). In general, this is attributed to the fact that low-income individuals often have limited financial resources (Leonard *et al.*, 2017) and encounter greater financial challenges such as insufficient savings and higher levels of debt (Sabri *et al.*, 2023).

### *Effect of Spending Pattern on Financial Well-being*

According to the findings, only experiential, self-expressive, prosocial, and conspicuous spending had a significant and positive impact on financial well-being. In contrast, impulsive and compulsive spending revealed a significant yet negative effect. These findings align with previous studies. Razavi *et al.* (2020) observed that experiential spending enhances life satisfaction and alleviates negative emotions, even when controlling for income and materialism. Past research has also established that self-expressive spending positively influences one's sense of self and overall well-being (Bogner, 2023). Aknin (2020) highlighted that individuals who spend money on others tend to report greater happiness and well-being than those who spend money on themselves. For instance, purchasing high-priced items can provide a temporary psychological boost or a feeling of fulfilment (de Kerviler & Rodriguez, 2019). Additionally, compulsive spending has been reported to negatively correlate with financial satisfaction and positively correlate with debt levels (Güngördü Belbağ & Kurt Cihangir, 2019). In a similar vein, impulse buying behaviour has also been negatively associated with financial well-being (Rodrigues *et al.*, 2021).

### *The Effect of Spending Pattern on Financial Well-being Across Income Groups*

This study concluded that all types of spending patterns (compulsive, experiential, impulsive, self-expressive, prosocial, and conspicuous) were at a moderate level across all income groups, except for prosocial spending, which was recorded at a high level. Research indicates that individuals with higher incomes often have more disposable income, enabling them to participate in more substantial charitable donations and philanthropic activities (Maclean *et al.*, 2021). Despite this, individuals with lower incomes also engage in prosocial spending, albeit more modestly in terms of monetary value (Neumayr & Pennerstorfer, 2020). This demonstrates that people from all income levels are likely to engage in prosocial spending to some extent (Lok & Dunn, 2020).

Regarding the impact of spending patterns on the financial well-being of Malaysian consumers across different income levels, compulsive spending negatively affects the financial well-being of low- and middle-income individuals. However, this is not necessarily the case for high-income individuals. Those in the low-income group often have limited financial resources, and compulsive spending can worsen their situation by increasing debt. This makes it difficult to meet basic needs (Acthziger, 2022) and contributes to heightened financial stress (Mansor *et al.*, 2022). Although middle-income individuals may have more financial flexibility to cope with the negative consequences of compulsive spending (Jayashanka & Murphy, 2013), it can still lead to financial strain, reduced savings, and hinder long-term financial goals (Finney, 2020). Building on this, there is insufficient evidence to confirm a significant effect of compulsive spending on high-income individuals, who are generally observed to have lower tendencies toward compulsive buying (Owusu *et al.*, 2021).

Low-income individuals can enhance their financial well-being through experiential spending, though this is not a requirement for middle- and high-income individuals. This is supported by Jachimowicz *et al.* (2020), who emphasised that low-income individuals who engage in leisure activities experience greater happiness. Despite limited incomes, there are numerous low-cost activities available to this group. Puhakka (2021) also highlighted that participating in low-cost community events, spending time with loved ones, or enjoying nature can generate emotional and social benefits, enhancing overall well-being. Correspondingly, middle-income earners, who typically have greater financial flexibility, may be able to balance material and experiential spending (Sawhill & Guyot, 2022). Meanwhile, high-income individuals generally possess sufficient resources to spend on both material goods and experiences without financial strain (Karonen & Niemelä, 2020). Nevertheless, a study by Killingsworth (2021) noted that experienced well-being does not significantly increase beyond an income level of $300,000 annually. Instead of focusing on temporary pleasures, individuals may find deeper fulfilment through achieving financial goals (Baumann & Ruch, 2022) or making long-term investments (Igielnik, 2020).

Impulsive spending has been highlighted to negatively impact the financial well-being of high-income individuals, but not significantly affect low- and middle-income earners. For example, individuals with high incomes generally have more discretionary funds and may engage in impulsive spending, which could adversely affect their financial situation (Fenton-O'Creevy & Furnham, 2019). Despite their higher income, impulsive overspending can lead to a lifestyle beyond their means, increased debt (Fernández-López *et al.*, 2023), and hindered

financial goal attainment (Palmateer, 2021). In essence, the non-significant findings for low- and middle-income groups may be due to limited disposable income, leading them to engage in impulsive spending on a smaller scale (Barakat, 2019).

Self-expressive spending significantly improves financial well-being for low- and middle-income earners, though this is not necessarily the case for high-income individuals. For those with lower incomes, this type of spending can satisfy emotional and personal needs without jeopardising their finances, offering a sense of identity and self-fulfilment (Wallace *et al.*, 2021). Meanwhile, higher-income individuals may already possess the financial stability or discipline to engage in self-expressive spending without negatively impacting their financial health. This suggests that, relative to their income, self-expression spending is retained within a manageable range.

There was no significant effect of prosocial spending on financial well-being across all income levels. This might be due to small sample sizes or variability within income groups, leading to insufficient statistical power to detect a significant effect (Brysbaert, 2019).

In line with this, middle- and high-income individuals may enhance their financial well-being through conspicuous spending, whereas this is not necessarily the case for low-income earners. Furthermore, individuals in the middle- and high-income brackets are less likely to face financial hardship from conspicuous consumption (Berg, 2019). It can also serve as a means of displaying social or economic status, which may be culturally or socially valued (Wang *et al.*, 2022; Huang *et al.*, 2021). For low-income individuals, on the other hand, conspicuous spending may result in financial strain, as they have fewer resources to allocate toward luxury items or status symbols (Banuri & Nguyen, 2022).

## Conclusions

Overall, the study confirmed the proposed hypothesis that spending patterns significantly affect financial well-being. As such, experiential, prosocial, self-expressive, and conspicuous spending were observed to have positive effects on financial well-being, whereas compulsive and impulsive spending were associated with negative outcomes.

Additionally, the second proposed hypothesis that the effect of spending patterns on financial well-being differs across income levels was partially rejected. This suggests that not all spending patterns influence financial well-being differently across income groups. For compulsive spending, only low- and middle-income groups experienced a significant negative effect, while high-income groups did not (H7). Meanwhile, in terms of experiential spending, only low-income individuals demonstrated a significant positive effect (H8). Moreover, for impulsive spending, only high-income individuals presented a significant negative impact on financial well-being (H9). In addition, prosocial spending had no significant effect across all income levels (H10). Moreover, self-expressive spending was reported to positively affect financial well-being in low- and middle-income groups, though not in high-income individuals (H11). Lastly, conspicuous spending was significantly and positively associated with financial well-being in middle- and high-income groups, though not among low-income individuals (H12).

## Limitations and Further Study

This study is subject to several limitations. Notably, data collection was conducted during the COVID-19 endemic period, when many Malaysians were still facing economic difficulties. Although the situation was less complicated than during the peak of the pandemic, the "new normal" had already reshaped daily life. Therefore, generalising

the findings should be conducted with caution. Consistent with this, future studies could replicate this research once the economy fully stabilises.

Another limitation is that the study focused exclusively on consumer spending and did not examine the role of savings. In response, future research should contrast the impact of spending and saving to determine which factor exerts a greater influence on financial well-being. This is especially relevant, as many consumers depleted their savings during the pandemic to cover basic expenses.

Finally, this study classified income levels using the percentile method. Correspondingly, future research involving respondents with a wider range of income levels may produce results that are not directly comparable. Thus, incorporating income as a moderating variable could provide deeper insights into the relationship between spending patterns and financial well-being among Malaysian consumers.

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**Conflict of Interest Statement**

The authors agree that this research was conducted in the absence of any self-benefits, commercial, or financial conflicts and declare the absence of conflicting interests with the funders.

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