

**ADVANCED INTERNATIONAL JOURNAL OF  
BUSINESS, ENTREPRENEURSHIP AND SMES  
(AIJBES)**[www.aijbess.com](http://www.aijbess.com)**THE INFLUENCE OF FINANCIAL LITERACY AND FINANCIAL  
CAPABILITY ON FINANCIAL WELLBEING OF SMEs IN  
MALAYSIA**Mas Azira Mohamed<sup>1\*</sup>, Sellywati Mohd Faizal<sup>2</sup>, Nahariah Jaffar<sup>3</sup><sup>1</sup> Faculty of Management, Multimedia University, Malaysia  
Email: masaziramohamed@gmail.com<sup>2</sup> Faculty of Management, Multimedia University, Malaysia  
Email: sellywati.faizal@mmu.edu.my<sup>3</sup> Putra Business School, Malaysia  
Email: nahariah@putrabs.edu.my

\* Corresponding Author

**Article Info:****Article history:**

Received date: 19.09.2024

Revised date: 06.10.2024

Accepted date: 10.11.2024

Published date: 15.12.2024

**To cite this document:**

Mohamed, M. A., Faizal, S. M., & Jaffar, N. (2024). The Influence Of Financial Literacy And Financial Capability On Financial Wellbeing Of SMEs In Malaysia. *Advanced International Journal of Business Entrepreneurship and SMEs*, 6 (22), 53-68.

**DOI:** 10.35631/AIJBES.622005**This work is licensed under [CC BY 4.0](https://creativecommons.org/licenses/by/4.0/)****Abstract:**

This research aimed at finding out the effect of FL and FC on the FWB of SMEs in Malaysia. This study specifically focused on the FL framework developed by the OECD, which consist of three key components: The following constructs are chosen: financial behavior (FB), financial knowledge (FK), and financial attitude (FA). Also, the study also aimed at assessing the moderating effect of FC in this relationship. Participants for this study were SMEs in Malaysia and data was collected using a survey with 231 respondents. In line with the objectives and hypotheses, the data was analyzed using partial least square (PLS) – structural equation modeling. The results of the study supported the postulated FL and FC as having a significant effect on the FWB of SMEs. Therefore, it can be concluded that this study offered a strong reasoning that the link between FWB and FL was Moderated by FC. This research provides a novel way of considering the factors that affect the FWB of SMEs and relies on the Stimulus-Organism-Response theory. Thus, this study seeks to develop a holistic framework that captures the complex relationships between the factors that affect the FWB of SMEs. From the above literature, the researchers will be in a better position to comprehend and understand the concept of SMEs' FWB, especially in Malaysia. Thus, subsequent similar studies on SMEs' FWB may be conducted, and the difference found could be applicable across various industries or areas. The foregoing thus depicts the importance of SMEs in every economy as they are indeed the backbone. Nevertheless, few research pay attention to their FWB, particularly in Malaysia.

**Keywords:**

Financial Wellbeing, Financial Literacy, Financial Capability, Entrepreneur, SME

**Introduction**

Small and medium enterprises (SMEs) are considered as one of the most vital segments of the Malaysian economy as they contribute to more than 98 percent of the entire business entities in the country (Department of Statistics Malaysia, 2021). According to the Department of Statistics Malaysia (2021), “SMEs are an important pillar of the economy”, SMEs are responsible for contributing about 40% of the GDP of the country.

This view thus recognizes the SMEs as a vital part of the national economy and underlines the importance of sustaining the SMEs’ FWB for the future growth of the country, (Taghizadeh et al. , 2017). They stressed on the significance of the SME business owners’ FWB as a key factor that helps in the development of SMEs. The COVID-19 pandemic that erupted in the year 2020 had also affected the financial situations of numerous entities such as the SMEs. Therefore, the business owners’ well-being affects the growth and functioning of their companies (Sisharini et al. , 2020).

The underlying concept of FL which encompasses an individual’s capacity to comprehend and apply financial literacy concepts like financial planning, budgeting and investment forms the basis of FC. This refers to not only the knowledge of financial jargons, but also the application of such knowledge in arriving at certain decisions. These elements combine to form an individual’s or a business’s FWB, which is defined as the state of having FWB and security. This framework is very relevant when it comes to the determination of the FWB of SMEs. When viewed in the context of the SOR theory these factors can be used to give a rich explanation of how the external stimulus (S) will be processed in an organism (O) to produce specific financial behaviour or outcomes (R). This perspective is quite useful in understanding how SMEs could manage for or seize financial challenges and opportunities and, in the process, influence their growth, sustainability, and overall contribution to the national economy.

As the awareness of the link between well-being and business growth is on the rise, Bergmann (2002), there is still limited literature specifically investigating this association as pointed out by Azmi (2020). Nonetheless, as SMEs are considered one of the most significant contributors to Malaysia’s economic growth and their importance in strengthening the company’s preparedness in the face of global competition (Normah, 2018; Yuan, Azam, & Tham, 2020), there is a need for more research on the factors that influence the FWB of SMEs.

**Literature Review*****Financial well-being***

FWB is an essential component of overall quality of life as defined by Helliwell and Putnam (2004) who stated that it is “the sense of satisfaction with different domains of life.” This view is also attributable to Tiberius and Plakias (2010) who recognize its importance. FWB is considered as one of the aspects of overall quality of life, besides other factors which include physical environment, accommodation, job, health and recreation, as denoted by Van Praag et

al. , (2003) and Sabri et al. , (2019). The above authors Van Praag et al. (2003) pointed out that FWB is one of the aspects of well-being of the individual.

However, there is a difference in definitions of what it means to be FWB. Following Gerrans et al. (2014), it is always considered in terms of personal judgment, which implies that different people may interpret it differently. According to the work of Mokhtar et al. (2015), FWB is defined in detail as an indicator of a family or an individual's financial health. FWB is defined as a combination of the tangible financial factors like wealth and income and the perceived financial needs and financial well-being (Joo & Grable 2004; Plagnol 2011; Gerrans et al. 2014; Gonzales et al. 2020).

In addition, an individual's FWB is influenced by a number of factors which are contextual and individual as described by Gonzales et al. (2020). Also, financial literacy and counselling (Lusardi & Mitchell 2011; Gerrans et al. 2014) play a critical role in the formulation of FWB. Furthermore, financial literacy as examined by Joo and Grable (2004) and Gonzales et al. (2020), also affects one's FWB.

### ***Financial well-being and SMEs***

It is the small and medium enterprises that have been deemed to hold a lot of weight on the progress of a given nation's economy. In the particular case of Malaysia, SMEs make up a considerable 98 percent of business establishments. According to the SME Corporation Malaysia (2018), it is estimating that micro entrepreneurs constitute 5 percent of all business entities. These enterprises are quite significant as they contribute 37 percent. It constitutes one percent of the nation's Gross Domestic Product and engages about two-thirds of the working population. SME Corporation Malaysia (2018) is correct in asserting that 'This underpins the need to secure business growth and development within SMEs'.

While SMEs have made tremendous impacts on the economy as well as people's lives, the growth of SMEs in Malaysia has been rather poor. This is evident in the rise of SME employment in percentage of total employment where it has been growing at an average of 0. This is 73 percent, the main cause of which has been identified as the increasing number of SMEs in Malaysia, as stated by HRDF (2019).

Shepherd and Wiklund (2009) also support the relevance of the SME owners' well-being when analysing the findings of the studies on firm growth. It also notes that the health status of SME owners is an important factor in this process, as pointed by Azmi (2020).

However, it is necessary to bear in mind that FWB plays the role of a key factor that reflects the overall financial status of a person. This is especially important for the owners of the SMEs as they should aim at achieving FWB since it acts as a form of protection against financial stress as stated by Dunn and Mirzaie (2012). This study also recognizes the fact that there is a positive relationship between FWB and general well-being as stressed by Van Praag et al. (2003). Hence, analysing the FWB of SME business owners is equally important as the need to promote the growth of SME businesses.

### ***Financial Literacy***

According to OECD, FL is defined as 'the possession of knowledge and understanding of financial concepts and risks, and the skills, motivation, and confidence to apply such knowledge in order to make adequate decisions in a number of contexts; thus, improving the

FWB of individuals and the society, and enabling participation in economic processes' (Sabri & Aw 2019). While numerous definitions of FL exist in the research, this study primarily focuses on the OECD's (2020) FL framework, which consists of three key elements: FA, FB and FK.

The first dimension of FL is FK based on the guidelines given by OECD (2020). FK is understanding of certain financial principles and the use of mathematical skills in solving financial problems. High levels of financial literacy enable individuals to effectively take charge of their financial affairs, make rational decisions when it comes to investment and make proper responses to financial situations which in turn improve their financial health.

Secondly, FB refers to the choices that people take or do not take concerning financial issues. Some of the healthy financial habits that can help people to improve their financial status and minimize the financial risks include budgeting, saving and making sound investment. On the other hand, there are negative behaviours such as overspending, not saving or misusing debt, which could be counterproductive in this regard despite the fact that one may possess adequate knowledge on the aspect of finance.

Last of all, FA influences the decisions made by people regarding their finances and, consequently, their level of Financial Well-Being (FWB). Financial Attitude (FA) is defined as people's perception, propensity, and actions towards saving, spending, and financial management respectively. Despite the fact that every person can have some level of financial literacy it is still possible to stay far from the perfect financial health if a person has the wrong mindset when it comes to managing money or if he has some financial vices caused by the issues of psychology.

Here, the enhanced FL in all three facets, that is, FK, FB, and FA, is vital for increasing the effectiveness of FWB. Educating people about right skills, knowledge, and attitudes can go a very long way in improving the financial health status of people and society in general. Thus, in order to improve FL in all its aspects, a strategy that addresses all three areas is necessary. Consequently, this study has used the OECD's definition of FL to analyse its position in SMEs' FWB.

Over the years, researchers in the FL domain have increased their activity and acknowledged the relationship between FL and corporate performance (Ayub et al. 2020). Lusardi and Mitchell (2014) have also elaborated the importance of FL in relation to FC and the need to be informed on financial issues. However, owners with limited FL may not be able to properly assess and comprehend other forms of business funding (Vincent 2014; Usama & Yusoff 2019). Although FL is important for SMEs in Malaysia, the research on this subject is still scarce. Thus, this study can be deemed an essential reference for further works in this area of study.

### ***Financial Capability***

FC research aims at enhancing the knowledge on one's capacity to make financial choices (Xiao 2016). Johnson and Sherraden (2007) posit that FWB is shaped by three primary factors: As a result of this, the following three elements may be said to have been proved: Financial fitness, Financial competence as well as Financial opportunity. Some studies have looked at the correlations between FC and other variables such as money attitudes, financial pressure (Sabri et al. 2018), financial education (Xiao & O'Neill 2016), financial stress (Scott et al.

2018), financial satisfaction (Xiao & O'Neill 2018), and social contacts (Ranta et al. 2019). Furthermore, there is research done on the relation between social demographic characteristics and FC (Bharucha 2017; Loke 2017; Ooko 2017). Demographic factors including the age and ethnicity can be used to determine the population that is at risk, thus, allowing for preventive measures to be taken (Mokhtar, Sabri & Ho, 2020).

Tahir and Ahmed (2020) have carried out a number of studies to investigate the role of FC in moderating the relationship between FL and FWB and, therefore, contributed significantly to this field. On the other hand, Xiao and Porto (2017) focused on the moderating property of FC in the relationship between financial satisfaction and financial education. They described FC as a combination of FL and four essential FBs (spending behaviours, saving behaviours, retirement planning and checking of credit reports), and also an attitude of monitoring ones' financial status.

In their study, Xiao and Porto (2017) further explored FL in relation to the general definition of FC, thus, differentiating FL from FC as defined by Lusardi and Mitchell (2011), FL is the ability to comprehend fundamental financial concepts while Sherraden (2013) defined FC as the use of previously acquired FK and the accomplishment of financial activities. This paper seeks to establish whether the capacity of individuals in performing financial tasks mediate the objectives of FL.

Consequently, for SMEs, FC deficiency can be a bottleneck to their development and effectiveness. SMEs need the so-called financial management skills that are different from these of microenterprises and individuals to manage the business finances and achieve the sustainable growth (The World Bank 2018). FC is of great significance to entrepreneurs including SME operators as it enables them to make sound decisions and recognize good opportunities (Suryani et al. 2017). Thus, FC improvement can be regarded as a way to promote entrepreneurial spirit and improve financial management.

Improving the FC of SME owners or decision-makers can lead to SMEs' expansion, which go a long way in fuelling economic growth in regions with high levels of informal employment, typical of low- and middle-income countries. Thus, the present research aims at exploring the associations between FL and FC in the context of SMEs, as well as the moderating role of FC in the relationship between FL and FWB.

### ***Stimulus Organism Response Theory***

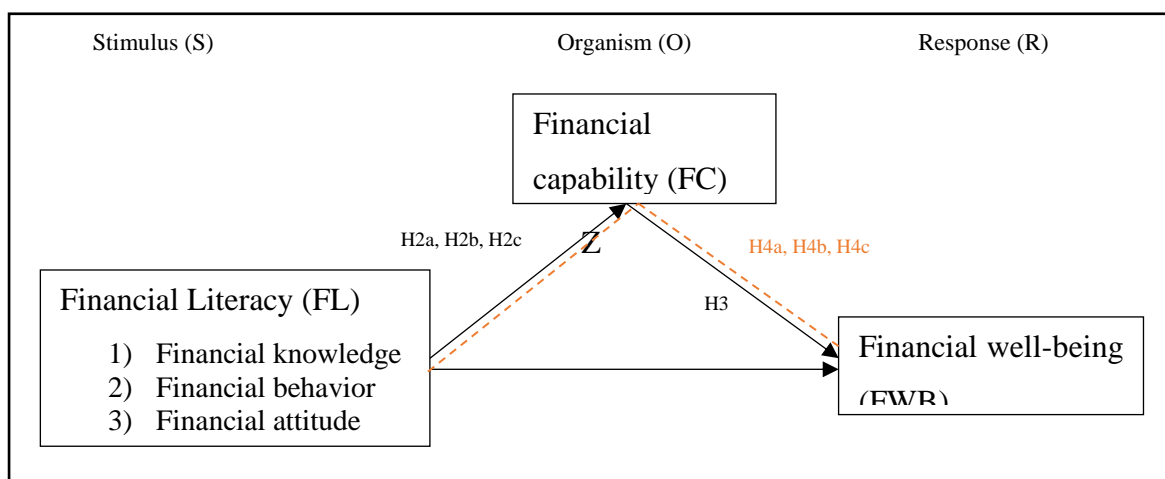
For the analysis of the given topic, the theoretical framework that has been used is the Stimulus-Organism-Response (SOR) model developed by Mehrabian and Russel in the year 1974. In this model, environmental factors act on a person's cognitive and affective states, with the latter affecting the individual's behaviours (Mehrabian & Russell 1974). The SOR framework, an extension of the traditional stimulus-response (S-R) approach, consists of three components: There are three components: (1) stimulus, which stands for external cues that elicit activism; (2) organism, which refers to the individual's evaluation of the situation and response; and (3) response, which is the consequence of the individual's reaction to the stimulus (Chen & Yao 2018; Zhang et al. 2018b; Zhu et al. 2020). Floh and Madlberger (2013) describe the model as a stimulus (S) that affects an individual's internal perception (O) followed by the person's approach or avoidance (R). This means that a stimulus can influence one's thoughts or feelings in a certain way and thus generate a positive or negative outcome. The external stimuli that people encounter in their day-to-day life can either be approached in a positive way or avoided



in a negative way. Emotions play the role of moderators that link the SOR model's factors in a sequence.

It has been applied in consumer behavior studies mainly in buyer behavior (Chen & Yao 2018), social media groups (Kamboj et al. 2018), politics (Under 2019), psychology (Green & Ben-Sasson 2010), and education with a focus on students' perception of knowledge hiding (Zhai et al. This is rather peculiar for the reason that the SOR model being a versatile model has not been implemented in any financial investigations. Consequently, this research is the pioneer to employ it in the financial literature.

The research questions of this study are as follow: How does FC moderate the relationship between FL and FWB? This paper presents a model that explains the determinants of financial condition in SMEs. Even though some of these relationships have been investigated in the past separately (Falahati & Sabri, 2015; Ameer & Khan, 2020), they have not been explored simultaneously within one model. Furthermore, this study aims at extending the literature on the determinants of SMEs' FWB by examining the moderating role of FC for the first time. The expected contribution of this study includes the findings that can be useful for future research in this area based on the literature and theories. The following figure outlines the structure of the research in this study.



**Figure 1: Theoretical Framework**

Source: Developed for the research

## Methodology

### Sample

The population for this study consisted of 231 owners of SMEs with sales turnover below RM20 million or the employment of no more than 75 full-time employees. Meanwhile, the biggest number of the respondents' business type of organization is sole proprietary which constitutes 112 or 48. 5%, followed by the partnership which has 86 or 37. 2% and company which has 33 or 14. 3%. In regard to the sectors the respondent's SMEs belong to, 73. 2% of them are services and other sectors while 26. 8% are manufacturing. Most of the respondents are in the 36-45 years age bracket accounting for 38. 5% of the total respondents followed by 25-35 years age bracket accounting for 33. 3% of the respondents. Regarding the educational background, 49. 4 % of the respondents have a bachelor's degree; 18. 6 % have diploma, 14. 7

% has SPM, 6.9 % other degrees, 6.5 % certificates and only 3.9 % has STPM. Out of 231 respondents, 62.3% of the populations are Malays, followed by the Chinese at 21.6%, Indians at 9.1%, and others 6.9%.

### Measurement

The assessment of FWB used in this research was made on the basis of the Incharge Financial Distress/Financial Wellbeing (IFDFW) Scale developed by Prawitz et al. (2006). For gauging FL, the OECD (2018) was utilized, which evaluated three aspects of FL: Therefore, the research findings are as follows: FK, FA and FB. Therefore, the study used the Financial Capability Scale (FCS) to assess the FC of SME owners. This survey instrument was developed by the Center for Financial Security in the year 2013.

### Findings

The target population for this study consisted of 231 participants who fulfilled the criterion of either owning SMEs with a sales turnover of less than RM300,000 or having less than five full time employees. The demographic characteristics of the screened participants are shown in Table 1, including the number and percentage of correct demographic information to ensure the data's accuracy.

**Table 1: Respondent profile**

Description	Demographic data	Frequency (N)	Percent (%)
Gender	Male	131	56.7
	Female	100	43.3
Age	25-35	77	33.3
	36-45	89	38.5
	46-55	51	22.1
	56-65	14	6.1
Ethnicity	Malay	144	62.3
	Chinese	50	21.6
	Indian	21	9.1
	Others	16	6.9
Education	SPM	34	14.7
	STPM	9	3.9
	Certificate	15	6.5
	Diploma	43	18.6
	Bachelor Degree	114	49.4
	Others	16	6.9
Types of business organisation	Sole Proprietary	112	48.5
	Partnership	86	37.2
	Company	33	14.3
SME Categories	Manufacturing	62	26.8
	services and other sectors	169	73.2

At first, the refined categories identified that all 231 subjects were either SME owners with sales turnover of less than RM20 million or organizations with less than 75 full time employees. Most of the respondents (48.5%) were sole traders and this was followed by partnerships (37.

2%) while the rest (14. 3%) were companies. A large portion of the respondents' SME categories were in services and other sectors at 73. 2%, the others were in manufacturing and construction at 26%. A higher percentage of 8% worked in the manufacturing sub-sector. Regarding the age distribution of the respondents, 38. 5% of the respondents fell within the age range of 36 to 45 years, followed by those within the 25-35 years of age bracket with 33. 3%, 41-50 with 13. 5%, 46-55 with 22. 1%, and 55-65 with 6. 1%. With regard to the level of education, the majority of subjects 49. 4% had a bachelor's degree; diplomas were the second most common, with 18. 6%, followed by SPM with 14. 7%, other degrees with 6. 9%, certificates with 6. 5% and STPM with 3. 9%. The distribution of the 231 respondents by ethnicity showed that 62. 3% were Malays followed by 21. 6% Chinese, 9. Only 1% of the whole population was Indian, while 6. 9% of the population comprised of other ethnic groupings.

### *Assessment of the Measurement*

Three criteria were applied to assess the measurement model for this study: The analysis used the measures of internal consistency reliability, convergent validity and indicator reliability. The assessment of the measurement model for this study is done based on guidelines presented in Table 2 below.

**Table 2: Measurement Model**

Construct	Item	Indicator	Outer loading	CR	AVE
Financial literacy	Financial attitude	FLA12	0.68	0.728	0.574
		FLA8	0.778		
		FLA6	0.596		
	Financial behaviour	FLB1	0.736	0.688	0.530
		FLB2	0.599		
		FLB8	0.706		
	Financial knowledge	FLK12	0.657	0.658	0.591
		FLK13	0.742		
Financial capability	Financial capability	FC4	0.643	0.717	0.558
		FC5	0.679		
		FC6	0.706		
Financial well-being	Financial well-being	FWB1	0.732	0.784	0.646
		FWB5	0.87		

Table 2 shows factor loadings of the items, which ranges from 0. 599 to 0.87, thus suggesting that the study's dependability is satisfactory. The dependence of the construct's indicators depends on the loading of each indicator. A value of >0. 3 is considered to be important, >0. 4 as more important and >0.5 as extremely significant. Nevertheless, the levels chosen may differ with judgment, objectives of the study, as well as other related works. Hence, there are no defined clear-cut factors or criteria as cut-off values regarding these markers (Smith et al. 2018). Since the purpose is to assess the most important factors in the factor solution, items with loadings of less than 0.5 were disregarded. The items whose factor loadings were less than the minimum cut-off point was omitted after doing the PLS extraction.



Convergent validity is the extent to which measures for two or more constructs that are thought to be related are indeed related to each other. Therefore, based on the literature, the threshold values that are recommended for the parameters are Average Variance Extracted (AVE) of greater or equal to 0.5. As for the analysis of the results obtained from the PLS algorithm, it was established that the AVE values of all the seven constructs were above the required 0.5, ranging from 0.530 to 0.646 (as demonstrated in the Table 2 below). These findings suggest that the measurement model that was used met the criteria for convergent validity.

In this research, discriminant validity of the constructs was checked using Fornell and Larcker Criterion. A construct's discriminant validity is said to be achieved if the square root of its AVE is greater than the correlation it has with any other construct. The analysis based on the PLS method revealed that for each construct, the square root of its AVE was greater than the construct's relationship with any of the other constructs. This result shows that the discriminant validity of the study was also achieved as depicted in Table 3. In other words, all the constructs assessed in this research are different from each other.

**Table 3: Discriminant Validity**

	<b>FLA</b>	<b>FLB</b>	<b>FC</b>	<b>FLK</b>	<b>FWB</b>
<b>FLA</b>	0.689				
<b>FLB</b>	0.293	0.656			
<b>FC</b>	0.361	0.258	0.676		
<b>FLK</b>	-	-	-	0.701	
	0.212	0.213	0.331		
<b>FWB</b>	0.395	0.269	0.512	-	0.799
				0.327	

### **Structural Model Assessment**

After this, the study proceeded to the evaluation of structural equation modelling in smart PLS after establishing that the measurement model was adequate.

### **Collinearity Issues**

The tolerance test is another way of assessing the level of multicollinearity and VIF values above 5 are indicative of multicollinearity among the predictor constructs (Hair et al., 2017). Therefore, when conducting the smart PLS test, the paper obtained the VIF values of the constructs, which varied from 1.020 to 1.314. These values suggest that there is moderate to low correlation among the constructs assessed in this research. The values of VIF are presented in Table 4 based on constructs.

**Table 4: Values of the Variation Inflation Factor for Collinearity**

	<b>FLA</b>	<b>FLB</b>	<b>FC</b>	<b>FLK</b>	<b>FWB</b>
<b>FLA</b>			1.162		1.238
<b>FLB</b>			1.141		1.165
<b>FC</b>					1.314
<b>FLK</b>			1.118		1.181
<b>FWB</b>					

In the study, the endogenous variables of FC and FWB yielded R<sup>2</sup> values of 0.239 and 0.349, respectively. These findings indicate that a substantial proportion of the variance in FC (R<sup>2</sup> = 0.239) and FWB (R<sup>2</sup> = 0.349) can be explained based on the guidelines previously mentioned. T-statistics were employed to assess the significance of all pathways using the bootstrapping method in SmartPLS 4. The bootstrapping settings involved the use of 1,000 subsamples, a one-tailed test, and a significance level of 0.05. For the one-tailed test, critical values corresponding to significance levels of 1% ( $\alpha = 0.01$ ), 5% ( $\alpha = 0.05$ ), and 10% ( $\alpha = 0.1$ ) were applied, which are 2.33, 1.645, and 1.28, respectively, as indicated by Ramayah et al. (2018). Examining the results in Table 5, the standardized coefficients for the routes ranged from -0.025 to 0.219, approximately falling between -1 and +1. According to the findings by Hair, Hult, Ringle, and Sarstedt (2017), stronger correlations are observed when estimated path coefficients are closer to +1, while weaker correlations are evident when they approach 0. FA were found to have t-values of 3.316, indicating significance at the 0.01 level ( $t = 3.316$ ,  $p < 0.01$ ) for the t-test. Similarly, FC ( $\beta = 0.914$ ,  $t\text{-value} = 5.935$ ,  $p < 0.01$ ) exhibited a positive relationship with FWB. Conversely, FB ( $\beta = 0.076$ ,  $t\text{-value} = 1.203$ ) and FK ( $\beta = 3.316$ ,  $p < 0.01$ ) had a negative impact on FWB. Regarding the direct relationship with FC, the predictors of FA ( $\beta = 0.101$ ,  $t\text{-value} = 3.494$ ,  $p < 0.01$ ) and FB ( $\beta = -0.058$ ,  $t\text{-value} = 1.955$ ) indicated positive relationships with FC. FK ( $\beta = -0.240$ ,  $t\text{-value} = 4.165$ ,  $p < 0.01$ ) however shows negative relationship on FC. Summaries of the findings are presented in Table 5 below.

**Table 5: Hypotheses Testing**

Hypotheses	Relationship	Std. Beta	Std. Deviation	t-value	p-value	Decision	BCI LL	BCI UL	f-square
H1a	Financial attitude -> Financial well-being	0.219	0.066	3.316	$p < 0.01$	Supported	-0.032	0.001	0.059
H1b	Financial behaviour -> Financial well-being	0.076	0.063	1.203	0.114	Not supported	-0.152	0.032	0.008
H1c	Financial knowledge -> Financial well-being	-0.388	0.117	3.316	$p < 0.01$	Not supported	0.081	0.035	0.029
H2a	Financial attitude -> Financial capability	0.101	0.029	3.494	$p < 0.01$	Supported	-0.01	0.074	0.065
H2b	Financial behaviour -> Financial capability	0.058	0.030	1.955	$p < 0.05$	Supported	-0.05	0.029	0.021
H2c	Financial knowledge -> Financial capability	-0.240	0.058	4.165	$p < 0.01$	Not supported	-0.434	-0.434	0.056
H3	Financial capability -> Financial well-being	0.914	0.154	5.935	$p < 0.01$	Supported	0.326	0.326	0.175

### Mediation Model

The research explored the relationship between FL and FWB, with FC considered as a potential mediator. To assess the mediation effect of FC, the bootstrapping technique in SmartPLS 4 was utilized. The mediation results revealed that FA ( $\beta = 0.093$ ,  $t\text{-value} = 2.945$ ,  $p < 0.05$ ), FB ( $\beta = 0.053$ ,  $t\text{-value} = 2.945$ ,  $p < 0.05$ ), and FK ( $\beta = 0.220$ ,  $t\text{-value} = 3.397$ ,  $p < 0.01$ ) all exhibited significant positive direct relationships. Furthermore, the results indicated a substantial positive indirect association between the dependent variable (FWB), the mediator (FC), and the independent factors (FA, FB, and FK). This finding confirms the presence of a mediation effect and supports hypotheses H4a, H4b, and H4c, as there are both direct and indirect associations with substantial and positive effects, as outlined by Hair et al. (2017). This finding supports the claim made by Remund (2010) that financial capability plays a mediating role in the relationship between financial well-being and financial literacy. The route coefficients for evaluating these mediating relationships are presented in Table 6.

**Table 6: Path Coefficient for Indirect Relationship**

Hypothesis	Relationship		Std. $\beta$	Std. error	T value	P value	Decision
H4a	Financial attitude	->	0.093	0.031	2.945	0.002	Supported
	Financial wellbeing						
	Financial attitude	->	0.093	0.031	2.945	0.002	
	Financial capability	->					
H4b	Financial wellbeing		0.053	0.028	1.870	0.031	Supported
	Financial behaviour	->					
	Financial wellbeing		0.053	0.028	1.870	0.031	
	Financial capability	->					
H4c	Financial wellbeing		-	0.065	3.397	0.000	Supported
	Financial knowledge	->					
	Financial wellbeing		0.220	0.065	3.397	0.000	
	Financial knowledge	->					
	Financial capability	->	-	0.065	3.397	0.000	
	Financial wellbeing						

Note: Bootstrap Samples = 5000, significance level at 1% (one-tailed test).

Source: Developed for the research

### Conclusion and Discussion

Thus, this study concluded its analysis of the factors affecting the FWB of SMEs in Malaysia using the SOR theory. Thus, all the hypotheses that were set at the beginning of the study were confirmed, which resulted in numerous theoretical and practical implications.

Lusardi and Mitchell (2014) highlighted that FL enhances FWB as indicated by the research done by the two scholars (Lusardi & Mitchell, 2014). Resonating with this claim, Joo and Grabble (2004) have supported this claim. The research of the present study, however, identifies only one factor of FL which is closely related to FWB. Nevertheless, the results are consistent with the overwhelming majority of other works devoted to the analysis of the connection between FL and FWB. FL can be regarded as an antecedent in the SOR theory which leads to specific cognitive emotional and behavioural consequences in people or organizations.

Thus, based on the findings of the study, it was concluded that FC indeed had a significant association with FWB. This finding is in consonance with several prior research works that were done by scholars including Fernandes, Lynch & Netemeyer (2014), Lusardi and Mitchell

(2011) and FINRA (2019). Thus, the study indicates that FC is a significant predictor of a person's FWB.

The direct relations of some aspects of FL have been explored in several earlier works; however, the mediators of how individuals get to FWB has not been well expounded in the literature. In this study, FC is an organism in the SOR theory through which a relationship between stimulus, FL, and FWB is created. In general, based on the SOR hypothesis, FC plays a very significant role in the connection between FL and FWB. FC can also be viewed as a tool that will help create the required culture that supports risk-taking business people as well as proper financial management. Thus, findings of the study have confirmed that financial literacy is one of the most significant determinants of financial capability. Furthermore, there are currently no studies examining financial well-being using the SOR model. Thus, this study will contribute significantly to the field of financial well-being research.

Although research questions are significant there are some limitations with regards to them. There are some limitations in relation to transferability of the study's findings to other countries or categories of firms, being possibly relevant only for the Malaysian SMEs context. Hence, this study was carried out after the Covid-19 pandemic that negatively impacted many SMEs across the globe. This implies that some limitations are likely to have been introduced due to the fact that the study was conducted in the post-pandemic period. First of all, the COVID-19 epidemic has affected enterprises, especially SMEs, and may have affected their FWB, FL, and FC.

This study has the following theoretical implications. First, since the study employs the SOR theory, it presents a novel way of analysing the factors that influence SMEs' FWB. By adopting this theory, the present research develops a clear model of the multiple factors that affect SMEs' FWB. Secondly, this study establishes several important determinants that have a bearing on the FWB of SMEs. Thus, the study aims at contributing to the knowledge of policymakers, business owners, and researchers with regard to the best ways of promoting and improving the FWB of SMEs.

This work offers a number of recommendations and guidelines for managers and owners of SMEs as a part of the conclusions derived from this research. First, the study establishes the factors that can affect SMEs' financial health including FC, attitude towards money and FL. This study's outcomes can be helpful for SME owners and managers to evaluate the strengths and weaknesses of their organizations and plan for potential deficiencies in knowledge, skills, or attitudes. Second, the findings suggest that SMEs should channel their resources in financial education and training to enhance their employees' financial literacy. This can enable SMEs to make the right financial decisions and hence enhance the financial performance of the organization. Altogether, it is possible to state that the research offers helpful recommendations for SME owners and managers to foster the FWB of their organizations. Thus, through recognizing the potential problems, supporting financial literacy and training, as well as developing a positive attitude to money and financial management, SMEs are capable of enhancing their FWB and, therefore, the likelihood of their success.

### **Acknowledgements**

This research was financially supported by the Fundamental Research Grant Scheme (FRGS) (Project ID: FRGS/1/2020/SS01/MMU/02/2). The researchers would like to thank the Ministry of Higher Education and Multimedia University in accomplishing this research.

**Author Contributions**

Mohamed contributed to the paper's conception, design, analysis, and interpretation as well as its writing and critical revision for intellectual content under the guidance of M. Faizal and Jaffar. The final approval of the version to be published was completed by M. Faizal and Jaffar, and all authors agreed to take responsibility for all aspects of the work.

**Disclosure statement**

No potential conflict of interest was reported by the author(s).

**Data availability**

The data that support the findings of this study are openly available.

**References**

- Ameer, R., & Khan, R. (2020). Financial socialization, financial literacy, and financial behavior of adults in New Zealand. *Journal of Financial Counseling and Planning*.
- Ayub, M. S., Harun, M. A., Mifli, M., & Majid, A. (2020). The role of business grant assistance, micro saving and financial knowledge towards Bumiputera SME business performance in Sabah. *Asian Journal of Entrepreneurship*, 1(4), 172-186.
- Azmi, E. A. A. E. M. (2020). Small Medium Enterprises (SMEs) business owner's wellbeing and business growth in Malaysia. *Geografia*, 16(4).
- Bergmann, H. (2002). Cultural aspects of entrepreneurship.
- Bharucha, J. P. (2017). Socio-Economic and Demographic Determinants of Indian Youth Financial Literacy: Determinants of Financial Literacy. *International Journal of Asian Business and Information Management*, 8(4), 15-28.
- Castro-González, S., Fernández-López, S., Rey-Ares, L., & Rodeiro-Pazos, D. (2020). The influence of attitude to money on individuals' financial well-being. *Social Indicators Research*, 148, 747-764.
- Chan, T. K., Cheung, C. M., & Lee, Z. W. (2017). The state of online impulse-buying research: A literature analysis. *Information & Management*, 54(2), 204-217.
- Chen, C.C., Yao, J.Y., 2018. What drives impulse buying behaviors in a mobile auction? The perspective of the stimulus-organism-response model. *Telematics Inf.* 35 (5), 1249–1262.
- Collins, J.M. & O'Rourke, C. (2013) Financial Capability Scale (FCS), University of Wisconsin Madison, Center for Financial Security. doi: 10.5281/zenodo.57102. Additional information is available at [fyi.uwex.edu/financialcoaching/measures](http://fyi.uwex.edu/financialcoaching/measures).
- Dunn, L. F., & Mirzaie, I. A. (2012). Determinants of consumer debt stress: differences by debt type and gender. Department of Economics: Columbus, Ohio State University.
- Falahati, L., & Sabri, M. F. (2015). An exploratory study of personal financial wellbeing determinants: examining the moderating effect of gender. *Asian Social Science*, 11(4), 33.
- Fernandes, D., Lynch, J., Jr, & Netemeyer, R. (2014). Financial literacy, financial education, and downstream financial behaviors. *Management Science*, 60(8), 1861–1883. <https://doi.org/10.1287/mnsc.2013.1849>
- FINRA. (2019). The state of U.S. financial capability: The 2018 national financial capability study. Retrieved from [https://www.usfinancialcapability.org/downloads/NFCS\\_2018\\_Report\\_Natl\\_Findings.pdf](https://www.usfinancialcapability.org/downloads/NFCS_2018_Report_Natl_Findings.pdf)
- Floh, A., & Madlberger, M. (2013). The role of atmospheric cues in online impulse-buying behavior. *Electronic Commerce Research and Applications*, 12(6), 425-439.



- Gerrans, P., Speelman, C., & Campitelli, G. (2014). The relationship between personal financial wellness and financial wellbeing: A structural equation modelling approach. *Journal of Family and Economic Issues*, 35, 145-160.
- Green, S. A., & Ben-Sasson, A. (2010). Anxiety disorders and sensory over-responsivity in children with autism spectrum disorders: is there a causal relationship?. *Journal of autism and developmental disorders*, 40, 1495-1504.
- Helliwell, J. F., & Putnam, R. D. (2004). The social context of well-being. *Philosophical Transactions of the Royal Society of London. Series B: Biological Sciences*, 359(1449), 1435-1446.
- HRDF (2019). Human Resources Development Fund: Industrial Insights Report. Ministry of Human Resources, Malaysia. Issue 4/2019.
- Iramani, I., Suryani, T., & Lindiawati, L. (2018). SME's financial literacy: An overview based on demographic aspects. *Journal of Economics, Business, & Accountancy Ventura*, 20(3), 283-294.
- Johnson, E., & Sherraden, M. S. (2007). From financial literacy to financial capability among youth. *J. Soc. & Soc. Welfare*, 34, 119.
- Joo, S. H., & Grable, J. E. (2004). An exploratory framework of the determinants of financial satisfaction. *Journal of family and economic Issues*, 25, 25-50.
- Joo, S. H., & Grable, J. E. (2004). An exploratory framework of the determinants of financial satisfaction. *Journal of family and economic Issues*, 25, 25-50.
- Kamboj, S., B. Sarmah, S. Gupta, and Y. Dwivedi. 2018. "Examining Branding Co-Creation in Brand Communities on Social Media: Applying the Paradigm of Stimulus-Organism-Response." *International Journal of Information Management* 39: 169–85.
- Kiril, K. O. S. S. E. V. (2020). OECD/INFE 2020 international survey of adult financial literacy.
- Loke, Y. J. (2017). The influence of socio-demographic and financial knowledge factors on financial management practices of Malaysians. *International Journal of Business and Society*, 18(1), 33-50.
- Lusardi, A., & Mitchell, O. S. (2011). Financial literacy around the world: an overview. *Journal of pension economics & finance*, 10(4), 497-508.
- Lusardi, A., & Mitchell, O. S. (2011). Financial literacy around the world: an overview. *Journal of pension economics & finance*, 10(4), 497-508.
- Lusardi, A., & Mitchell, O. S. (2014). The economic importance of financial literacy: Theory and evidence. *American Economic Journal: Journal of Economic Literature*, 52(1), 5-44.
- MALAYSIA, M. M. S. (2021). Department of Statistics, Malaysia. Change, 2021.
- Mehrabian, A., & Russell, J. A. (1974). An approach to environmental psychology. the MIT Press.
- Mokhtar, N., Husniyah, A. R., Sabri, M. F., & Talib, M. A. (2015). Financial well-being among public employees in Malaysia: A preliminary study. *Asian Social Science*, 11(18), 49.
- Nuradibah Mokhtar, Mohamad Fazli Sabri, Catherine Soke Fun Ho /*Journal of Asian Finance, Economics and Business* Vol 7 No 10 (2020) 1081–1091
- OECD, O. (2018). INFE toolkit for measuring financial literacy and financial inclusion. Paris: Organisation for Economic Co-operation and Development.
- Ooko, R. A. (2017). Demographic and Socioeconomic Factors Influencing Financial Literacy among Employees of Deloitte Kenya. Doctoral dissertation, United States International University-Africa.
- Plagnol, A. C. (2011). Financial satisfaction over the life course: The influence of assets and liabilities. *Journal of Economic Psychology*, 32(1), 45-64.

- Prawitz, A., Garman, E. T., Sorhaindo, B., O'Neill, B., Kim, J., & Drentea, P. (2006). InCharge financial distress/financial well-being scale: Development, administration, and score interpretation. *Journal of Financial Counseling and Planning*, 17(1).
- Ranta, M., Punamäki, R-L., Chow, A., & Salmela-Aro, K. (2019). The Economic Stress Model in Emerging Adulthood: The Role of Social Relationships and Financial Capability. *Emerging Adulthood*. <https://doi.org/10.1177/2167696819893574>.
- Remund, D. L. (2010). Financial literacy explicated: The case for a clearer definition in an increasingly complex economy. *Journal of consumer affairs*, 44(2), 276-295.
- Sabri, M. F., & Aw, E. C. X. (2019). Financial literacy and related outcomes: The role of financial information sources. *International journal of business and society*, 20(1), 286-298.
- Sabri, M. F., Abdullah, N., Zenhendel, M., & Ahmad, S. Y. (2018). Moderation effect of gender on financial literacy, money attitude, financial strains and financial capability. *Malaysian Journal of Consumer and Family Economics*, 20(1), 83-101.
- Sabri, M., Wijekoon, R., & Rahim, H. (2020). The influence of money attitude, financial practices, self-efficacy and emotion coping on employees' financial well-being. *Management Science Letters*, 10(4), 889-900.
- Scott, J. K., Vu, N. N., Cheng, Y., & Gibson, P. (2018). Financial capability: Literacy, behaviour, and distress. *Financial Services Review*, 27(4), 391-411.
- Shepherd, D., & Wiklund, J. (2009). Are we comparing apples with apples or apples with oranges? Appropriateness of knowledge accumulation across growth studies. *Entrepreneurship theory and practice*, 33(1), 105-123.
- Sherraden, M. S. (2013). Building blocks of financial capability. *Financial education and capability: Research, education, policy, and practice*, 3-43.
- Sisharini, N., & Sunaryati Hardiani, C. S. R. (2020). Financial Literacy And Financial Inclusion Improvement Based On Web Applications To Achieve MSMEs Financial Well Being. *International Journal of Business Marketing and Management*, 5(11), 61-65.
- SME Corporation Malaysia, 2018. SME Annual Report 2017/2018, SME Corp. Malaysia
- Taghizadeh, S. K., Karini, A., Nadarajah, G., & Nikbin, D. (2020). Knowledge management capability, environmental dynamism and innovation strategy in Malaysian firms. *Management Decision*, 59(6), 1386-1405.
- Tahir, M. S., Ahmed, A. D., & Richards, D. W. (2021). Financial literacy and financial well-being of Australian consumers: A moderated mediation model of impulsivity and financial capability. *International Journal of Bank Marketing*, 39(7), 1377-1394.
- Tiberius, V., & Plakias, A. (2010). Well-being.
- Unde, A. A. (2019, October). SOR Theory and the issues of environment: the role of online social media in affecting public opinion. In *IOP Conference Series: Earth and Environmental Science* (Vol. 343, No. 1, p. 012102). IOP Publishing.
- Usama, K. M., & Yusoff, W. F. (2019). The impact of financial literacy on business performance. *International Journal of Research and Innovation in Social Science*, 3(10), 84-91.
- Van Praag, B. M., Frijters, P., & Ferrer-i-Carbonell, A. (2003). The anatomy of subjective well-being. *Journal of Economic Behavior & Organization*, 51(1), 29-49.
- Vincent Sebikari, K. (2014). Entrepreneurial Performance and Small Business Enterprises in Uganda. *International Journal of Small Business and Entrepreneurship Research*, 2, 1–12.
- World Bank Group. (2018). Investigating the Financial Capabilities of SMEs: Lessons from a 24-Country Survey. World Bank.

- Xiao, J. J., & O'Neill, B. (2016). Consumer financial education and financial capability. *International Journal of Consumer Studies*, 40(6), 712-721.
- Xiao, J. J., & O'Neill, B. (2018). Propensity to plan, financial capability, and financial satisfaction. *International Journal of Consumer Studies*, 42(5), 501-512.
- Xiao, J. J., & Porto, N. (2017). Financial education and financial satisfaction: Financial literacy, behavior, and capability as mediators. *International Journal of Bank Marketing*.
- Xiao, J. J., & Porto, N. (2022). Financial capability and wellbeing of vulnerable consumers. *Journal of Consumer Affairs*, 56(2), 1004-1018.
- Xiao, J.J. (2016). Consumer Financial Capability and Wellbeing. In: Xiao, J. (eds) *Handbook of Consumer Finance Research*. Springer, Cham. [https://doi.org/10.1007/978-3-319-28887-1\\_1](https://doi.org/10.1007/978-3-319-28887-1_1)
- Yoshino, N., Morgan, P. J., & Long, T. Q. (2020). Financial literacy and fintech adoption in Japan.
- Yuan, Y., Azam, S. F., & Tham, J. (2020). Factors Influencing Enterprise Performance of Small and Medium Size Enterprises (Smes) In Malaysia. *European Journal of Management and Marketing Studies*.
- Zhai, X., Wang, M., & Ghani, U. (2020). The SOR (stimulus-organism-response) paradigm in online learning: an empirical study of students' knowledge hiding perceptions. *Interactive Learning Environments*, 28(5), 586-601.
- Zhang, N., Pang, J., Wan, J., 2018b. Self-disclosure in social network sites: an integration of stimulus-organism-response paradigm and privacy calculus model. *WHICEB Proc.* 14.
- Zhu, L., Li, H., Wang, F. K., He, W., & Tian, Z. (2020). How online reviews affect purchase intention: a new model based on the stimulus-organism-response (SOR) framework. *Aslib Journal of Information Management*, 72(4), 463-488.