

The Relationship between Financial Literacy and Entrepreneurship Spirit with Mediating Effect of Personal Financial Management

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ABSTRACT

The study is designed to examine the relationship between accounting undergraduates' financial literacy (financial knowledge, financial attitude, and financial behavior) and their entrepreneurship spirit, with mediating effects of personal financial management (saving, investment, money attitude and wealth accumulation). A quantitative method was employed, and an adapted questionnaire was administered to accounting undergraduates in seven public universities across Malaysia. The Theory of Planned Behavior (TPB) serves as the underlying theory for explaining how financial literacy and personal financial management influence the entrepreneurship spirit. A sample of 756 responses was gathered through simple random sampling, and Structural Equation Modeling (SEM) was used to analyze the data. Findings from the path analysis indicated that there was no significant relationship between accounting undergraduates' financial literacy and entrepreneurial spirit. However, personal financial management fully mediated the relationship between financial literacy and entrepreneurship spirit. Strong and meaningful relationships were identified between financial literacy and personal financial management, including personal financial management and entrepreneurship spirit. This insight suggests that TPB could be enhanced by including mediating variables like personal financial management to better capture the mechanisms linking financial literacy to entrepreneurial spirit. Thus, the findings indicate that a higher level of financial literacy can shape better personal financial

management among the youth and may instill their entrepreneurial spirit. Higher education institutions, educators, and policymakers can leverage this finding to develop a more integrated curriculum and effective policies that enhance students' entrepreneurial spirit.

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INTRODUCTION

Entrepreneurship has been acknowledged worldwide as a significant solution that can resolve arising and ongoing issues. It serves an essential function in stimulating economic advancement (Hassan et al., 2020; Stoica et al., 2020), which can, at the same time, help reduce rates of unemployment since new venture creation creates more job opportunities. Despite its importance and advantages, becoming an entrepreneur is not popular among individuals, especially among the youth. In fact, the youth are more eager to fill vacant positions within government institutions (Hassan et al., 2020), including the private sector, which indicates their disinterest in venturing into entrepreneurship. Recent studies have also shown that Malaysian youth are increasingly reluctant to pursue entrepreneurship, believing they are not suited for such careers (Aligishiev & Gravesteijn, 2020). This may have to do with their lack of skills to become successful entrepreneurs.

Financial skills are essential when it comes to setting up a new business, and it becomes especially imperative to secure its long-term viability (Isomidinova et al., 2017; Ripain et al., 2017). Furthermore, being financially literate allows entrepreneurs to effectively manage business finances in terms of budgeting and managing financial and credit risks (Suparno & Saptono, 2018), ensuring financial resources are utilized effectively and strategically. This emphasizes that financial literacy is an essential skill that entrepreneurs need to be equipped with to be successful in the long run. Empirical research underscores the

strong connection between financial literacy and entrepreneurial success. In Malaysia, individuals possessing higher financial literacy are more prone to undertake entrepreneurial ventures and effectively oversee their business finances. This suggests that increasing financial literacy can contribute to better entrepreneurial performance (Rehman & Mia, 2024).

However, recent statistics reported that Malaysians' financial literacy is relatively low. The 2018 Malaysian Credit Counselling and Debt Management (AKPK) report suggests that working adults in Malaysia were unsure of the appropriate amount to save, showing their difficulties in managing financial planning. Bank Negara's Financial Capability and Inclusion Demand Side Survey in 2018 also depicted Malaysians' low level of financial literacy, where it was highlighted that Malaysians struggled to plan and save for both retirement funds and emergency funds of one thousand ringgit.

The youth in the country also exhibited a low level of financial literacy, as the Malaysian Department of Insolvency (MDI, 2019) reported that 22 percent of bankruptcy cases in 2019 involved young people. Furthermore, the youth in the country struggle with a lack of financial knowledge and are heavily weighed down by debt (Murugiah, 2016). Research indicates that financial literacy levels among Malaysian youth remain concerning. Despite various financial education initiatives, many young adults struggle with personal financial management, leading to high debt levels and poor savings. This financial fragility hinders their ability to engage confidently in

entrepreneurship (Rehman & Mia, 2024). These statistics raise concerns for the financial well-being of individuals in the country and impede potential entrepreneurs from emerging in the nation. Hence, the financial literacy of young people should be amplified to ensure they are financially competent in managing their personal finances, which could instill confidence to start and manage a business.

Heightened financial literacy levels may ignite entrepreneurial spirits, which can be beneficial for the nation, especially during times when rates of unemployment are rising. The 2018 Graduate Tracer Study Report found that nearly 60 percent of undergraduates in Malaysia remained unemployed a year after graduation, with the rate anticipated to rise due to the COVID-19 pandemic (Abd Rahman et al., 2020). Yet, this could be averted if the youth dive into entrepreneurship since it can create more job opportunities and reduce the unemployment rates among the youth. Expanding entrepreneurship would contribute to Malaysia's vision of becoming an entrepreneurial nation by 2030. This research seeks to ignite the entrepreneurial spirit among youth by enhancing their financial capabilities. The entrepreneurial spirit delves into the intrinsic motivation and mindset that drive entrepreneurial behavior. Therefore, this study aims to explore the connection between financial literacy and entrepreneurial spirit, focusing on the role of personal financial management as a mediator.

LITERATURE REVIEW

Financial Literacy and Entrepreneurship Spirit

Entrepreneurship is establishing a new business venture (Kloepfer & Castrogiovanni, 2018). According to Malaysia's National Entrepreneurship Policy 2030 (NEP 2030), it is an essential part of the economic growth of a country since it contributes to an increase in GDP, stimulates investments and provides a platform for the creation of more job opportunities (Ministry of Entrepreneur Development and Cooperatives [MEDAC], 2019). Entrepreneurship also results in the development of innovation since the nature of entrepreneurship is linked to creativity and innovativeness. The NEP 2030 outlines various initiatives and programs aimed at helping Malaysia achieve its goal of becoming a leading entrepreneurial nation by 2030. Regardless, this becomes challenging since the effort requires improvement in multiple aspects, such as culture and mindset, fund access, technology, education, skills, and many more (MEDAC, 2019). The policy highlights both internal and external challenges faced by entrepreneurs. However, it has been noted that the economic success of entrepreneurs is largely driven by personal effort and skills. Thus, an enhanced level of entrepreneurial spirit needs to be developed for them to be sustainable on top of being successful.

Financial literacy encompasses a range of elements, including financial knowledge, skills, awareness, attitude, and behavior, all of which are vital for making informed financial decisions that contribute

to financial well-being (Atkinson & Messy, 2012). According to Zaimovic et al. (2023), financial literacy is a blend of awareness, knowledge, skills, attitudes, and behaviors essential for making informed financial decisions and improving individual financial well-being. This definition integrates various dimensions of financial literacy into financial security and overall economic progress.

Based on the definition, three dimensions of financial literacy were identified to measure financial literacy: financial knowledge, financial attitude, and financial behavior. Financial knowledge encompasses a person's awareness of fundamental financial principles and ability to use numerical skills in financial decision-making (Atkinson & Messy, 2012). Financial attitude is the perception of and how one feels about financial matters and is usually viewed positively or negatively. Financial behavior relates to how one undertakes or acts in financial transactions (Kadoya & Khan, 2020). The three elements make up financial literacy since knowledge, perception, and action are significant in making informed financial choices.

Financial literacy plays a critical role in influencing the performance of an entrepreneur (Li & Qian, 2019; Usama & Yusoff, 2018). Entrepreneurs with sound financial literacy tend to effectively utilize financial resources, including taking advantage of financial services to continuously improve their business performance (Fatoki, 2014). The business will also benefit from effective financial forecasts, enabling it to dive into advantageous business opportunities and

obtain skyrocketing profits (Adomako & Danso, 2014). Essentially, it can be said that financial literacy is one of the contributing factors to a successful business performance. Consistent with this, possessing sound financial literacy may also ignite the entrepreneurial spirit of an individual since it instills confidence that their business will eventually become successful.

Across the literature, the link between financial literacy and entrepreneurship spirit has been established globally and locally (Ahmad et al., 2021). Ahmad et al. (2021) revealed that the entrepreneurial motivation of accounting students is affected by financial literacy and financial behavior. Oggero et al. (2020) discovered a strong positive correlation between financial literacy and the entrepreneurial spirit of men in Italy, while the entrepreneurial spirit of women was more affected by contextual factors. In China, entrepreneurship participation and performance were significantly affected by financial literacy (Li & Qian, 2019), indicating the development of entrepreneurial intent through financial literacy. Meanwhile, Pakistani youth's entrepreneurial intent was positively impacted by their financial attitude and financial knowledge (Bilal et al., 2020). A study in Turkey found that the relationship between youth's entrepreneurial intention and financial attitude, as well as financial behavior, was significant and that financial knowledge would only impact their entrepreneurship intention when converted into their attitude or behavior. Findings across the globe confirm that financial literacy has a positive and significant link with the spirit of entrepreneurship. In addition, financial knowledge, financial

behavior, and attitude each play their role in representing financial literacy and prove their significance in developing entrepreneurial spirit.

A different study found that entrepreneurship education and financial support strongly influence youth entrepreneurial attitude, which drives their intention to become entrepreneurs (Hassan et al., 2020). Although the results insinuate that youth would be more entrepreneurially inclined with the availability of financial means, the authors emphasized that they would have to realize the responsibility of providing a return on investment for the investors. Due to this, sound financial literacy is required to effectively utilize the financial resources received to gain profit and lead the business to success. Overall, the findings from both local and global contexts portray the significance of financial literacy in shaping entrepreneurial spirit, attitude, intention, and behavior. Although there is no defining study that suggests financial literacy can ignite one's entrepreneurship spirit in Malaysia, the consensus in the studies discussed can be a foundation to hypothesize that:

H₁: There is a significant relationship between the financial literacy and entrepreneurship spirit of accounting undergraduates

Financial Literacy and Personal Financial Management

Personal finance refers to a variation of consumer finance, including family finance (Xiao & Tao, 2020). Managing personal finances involves how individuals handle

and organize their daily financial affairs (Meghana & Sarala, 2020), including savings, investment management, and financial planning. This study investigates individuals' personal financial management practices regarding their perceptions of savings, investment, and wealth accumulation, including their attitude toward money.

Savings are the portion of an individual's income that is separated and kept for future use and not included as a part of daily expenses and commitments. Savings help individuals overcome future financial burdens and improve their quality of life (Kassim et al., 2020). On the other hand, investment is the act of acquiring items or assets to generate income or increment or appreciate the value of said assets. Most high-return investments require the individual to have a high holding power over a long period to realize the asset's income and appreciation (Sailaja & Madhavi, 2016). Money attitude is the perception individuals have towards money, whether positive or negative. A sound money attitude encourages individuals to behave wisely in financial transactions, especially personal ones. Wealth accumulation relates to the collection of assets over a period (Lok et al., 2017). Personal wealth is closely linked to one's savings behavior (Ketkaew et al., 2020) and can be accumulated from a variation of financial sources, including savings and personal inheritance (Wu, 2011), planning investments (Sailaja & Madhavi, 2016), as well as financial assets (Ketkaew et al., 2020). Wealth accumulation is also closely tied to retirement planning (Lok et al., 2017). This study examines the

youth's perception of savings, investment, money attitude and wealth accumulation to gain insight into their financial management.

Managing personal finance may require individuals to possess financial-related skills to achieve financial well-being in the future (Ketkaew et al., 2020). Following this, being financially literate may be a strong factor that influences individuals to make wise decisions about their personal finances in terms of savings, investment, attitude towards money, and wealth accumulation. Wise management of these financial activities can help individuals provide a financial cushion for themselves in times of crisis or, better yet, achieve financial independence in the long run.

Across the literature, scholars have collectively found that financial literacy can be significantly linked with making healthy saving decisions (Murendo & Mutsonziwa, 2017) and sound saving behavior (Amari et al., 2020; Nguyen & Doan, 2020). Although prudent savings behavior can also be developed from educational backgrounds and early exposure from family (Kassim et al., 2020), being financially literate can enhance an individual's ability to consistently behave and make rational saving decisions in the long run.

On a similar note, financial literacy also significantly influences decision-making related to investments (Abdullah et al., 2019; Zaidi & Tahir, 2019). Financial literacy is also able to ignite short-term and long-term investment intentions among the youth (Sadiq & Khan, 2019). This insinuates that financial literacy is a form of confidence that can encourage and drive the youth to develop interest and success in investing. An

interesting finding by Zaidi and Tahir (2019) highlighted that accounting information is vital in making investment decisions, suggesting that investors require accounting knowledge to make investment decisions.

Further, the literature lacks studies examining the significance of financial literacy in developing a positive money attitude, other than one by Isomidinova et al. (2017), which indicated that financial literacy did not influence money attitude. However, some studies indicate the links between both constructs. Albeerdy and Gharleghi (2015) discovered that money attitude plays a key role in determining financial literacy. According to this, a more positive attitude leads to a higher level of financial literacy; this may be due to their willingness to better manage their finances, which is derived from their good attitude towards money.

In another study, money attitude and financial literacy were identified as key contributors to an individual's financial well-being (Abdullah et al., 2019), insinuating that both are needed to attain financial success. According to Qamar et al. (2016), financial literacy serves as a moderating factor in the connection between money attitude and personal financial management. This implies that financial literacy is essential in influencing one's attitude towards money and approach to personal financial management. These findings indicate that financial literacy and money attitude correlate. Hence, this paper hypothesizes that financial literacy can influence the attitude toward good money.

From the perspective of wealth accumulation, studies across the literature

have indicated the importance of financial literacy in accumulating wealth and planning for retirement. According to Janposri (2021), financial literacy is beneficial in accumulating wealth and planning for retirement. Anxiety levels are also reduced since more assets can be procured from being financially literate (Kadoya et al., 2018). In Japan, it has been demonstrated that financial literacy significantly contributes to individuals' wealth accumulation, yielding substantial economic benefits (Sekita et al., 2018). Further, wealth accumulation was studied against the contribution of individuals and retirement planning (Ketkaew et al., 2020; Lok et al., 2017), which also suggests being financially literate in both activities. Essentially, it can be said that financial literacy is needed to accumulate wealth, which is also part of retirement planning. Drawing from the discussion on savings, investment, money attitude, and wealth accumulation, it is apparent that financial literacy is a key element of effective personal financial management. This leads to the following hypothesis:

H₂: There is a significant relationship between financial literacy and the personal financial management of accounting undergraduates

Personal Financial Management as a Mediator

On top of being financially literate, having a good sense of personal financial management can also be a factor that can ignite the youth entrepreneurship spirit. This is because competent personal finance skills

may help to develop a strong foundation in managing the finances of a business. Further, it can also be a source of funds for youth to venture into entrepreneurship, should they manage their finances wisely (Amari et al., 2020). For instance, strategic saving habits can help individuals build funds to start a business. Possessing a positive money attitude encourages individuals to desire effective utilization of business finance resources, while investment knowledge and a good perception of wealth accumulation can ensure the business value appreciates in the long term and simultaneously gradually expands (Janposri, 2021).

Ripain et al. (2017) recognized that financial literacy was significant in managing a business. They suggested that the financial management skills of entrepreneurs need to be enhanced since their financial literacy level was concerning. Following this, the authors recommended that financial management skills need to be enhanced at an early level through education. Moreover, the authors emphasized that possessing good financial management skills can ensure the long-term survival of a business. Financial management skills are commonly one of the elements contributing to entrepreneurial success (Salikin et al., 2014). From these discussions, it can be hypothesized that:

H₃: There is a significant relationship between personal financial management and the entrepreneurship spirit of accounting undergraduates

H₄: Personal financial management mediates the relationship between

financial literacy and the entrepreneurial spirit of accounting undergraduates

METHOD

This study explores how financial literacy influences entrepreneurial spirit and the role of personal financial management as a mediator. This quantitative research employed a self-administered questionnaire adapted from several scholars. Items for financial literacy were adapted from scholars such as Atkinson and Messy (2012), Shockey (2002), and van Rooij et al. (2012); meanwhile, for entrepreneurship spirit, the items were adapted from Liñán and Chen (2009). The Theory of Planned Behavior (TPB) was used as an underlying framework, where financial literacy and personal financial management were conceptualized as accounting undergraduates' perceived behavioral control, and entrepreneurship spirit as the behavioral intention. The study highlights the psychological and behavioral mechanisms through which financial knowledge and skills translate into entrepreneurial motivation by integrating TPB.

The questionnaire includes (1) the demographic profile of the participants (gender, age, university); (2) financial literacy (financial knowledge, financial attitude, and financial behavior); (3) personal financial management (saving, investment, money attitude and wealth accumulation); and (4) entrepreneurship spirit (see Appendix for details). The reliability and validity of the questionnaire were ensured through a pilot study, with the results prompting final revisions before

it was used in the main study. The analysis showed that the questionnaire was reliable and valid, confirming that it was ready for larger data collection.

The questionnaire was administered to final-year accounting undergraduates in seven universities across Malaysia. Accounting students acquire financial knowledge, positive financial attitudes, and sound financial behavior through their curriculum. These factors contribute to their financial management and serve as a foundation for entrepreneurial success. Hence, focusing on this group provides insights into how strong financial literacy and personal financial management skills can influence entrepreneurial spirit (Singh & Masuku, 2014). A total of 756 responses were obtained through simple random sampling. However, only 749 were applicable for further analysis. The collected data was cleaned using SPSS, and structural equation modeling (SEM) was performed with SmartPLS 4 to analyze the relationship between financial literacy and entrepreneurial spirit and the mediating effect of personal financial management.

FINDINGS

Structural Equation Modelling

The structural equation model was evaluated through measurement and structural models. The evaluation of the measurement model extends as a Hierarchical Component Model (HCM) since the lower-order constructs (LOC; financial knowledge, financial behavior, financial attitude, savings, investment, money attitude and wealth accumulation) are simultaneously

mapped to single higher-order constructs (HOC; financial literacy and personal financial management; Hair et al., 2018). The reflective-reflective HCM is conducted through an embedded two-stage approach. In the initial stage, the repeated indicator approach was applied to derive the LOC scores, which were then used as manifest variables in evaluating the HOC (Sarstedt et al., 2019). The evaluation of the HOCs is based on using the LOC scores as indicators within the measurement model of the HOCs. Internal consistency, convergent validity, and discriminant validity were evaluated throughout both stages.

Stage 1: Assessment of LOC Measurement Model

Internal consistency for the LOCs was confirmed, as all Cronbach's alpha and composite reliability values surpassed the recommended threshold of 0.7 (Hair et al., 2017). The factor loadings and the average variance extracted (AVE) were considered to assess the convergent validity of the LOCs. Factor loadings of items with values above

0.6 were retained to ensure high convergent validity, resulting in the deletion of five items from financial attitude and money attitude (FA1, FA2, MA1, MA3 and MA4). Further, all LOCs meet the recommended threshold values for AVE, exceeding 0.5 (Hair et al., 2017). Essentially, the internal consistency and convergent validity of the LOC measurement model were established. The results are summarized in Table 1.

The discriminant validity of the LOCs was checked through the Fornell-Larcker Criterion (Fornell & Larcker, 1981). To establish discriminant validity using the Fornell-Larcker Criterion (1981), the square root of the AVE for each LOC must be greater than its highest correlation with other LOCs (Hair et al., 2017). Table 2 displays the square root of the AVE for each LOC, which exceeds the highest correlation with other LOCs. As a result, discriminant validity is established for the LOC measurement model. Accordingly, the LOC measurement model is displayed in Figure 1.

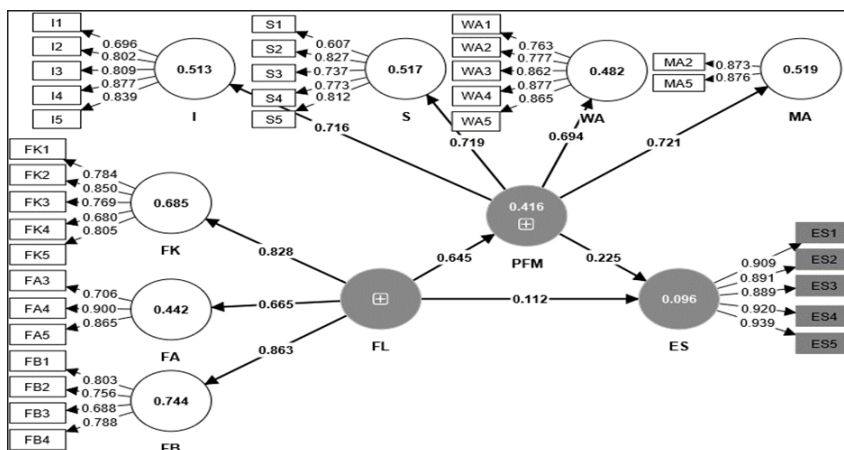


Figure 1. LOC measurement model

Table 1
Factor loading, validity and reliability of LOCs

LOCs	Items	Loadings (>0.6)	CA (>0.7)	CR (>0.7)	AVE (>0.5)
ES (Entrepreneurship spirit)	ES1	0.909	0.948	0.96	0.827
	ES2	0.891			
	ES3	0.889			
	ES4	0.92			
	ES5	0.939			
FA (Financial attitude)	FA3	0.706	0.766	0.866	0.686
	FA4	0.9			
	FA5	0.865			
FB (Financial behavior)	FB1	0.803	0.756	0.845	0.578
	FB2	0.756			
	FB3	0.688			
	FB4	0.788			
FK (Financial knowledge)	FK1	0.784	0.836	0.885	0.607
	FK2	0.85			
	FK3	0.769			
	FK4	0.68			
	FK5	0.805			
I (Investment)	I1	0.696	0.864	0.903	0.651
	I2	0.802			
	I3	0.809			
	I4	0.877			
	I5	0.839			
MA (Money Attitude)	MA2	0.873	0.693	0.867	0.765
	MA5	0.876			
S (Saving)	S1	0.607	0.809	0.868	0.57
	S2	0.827			
	S3	0.737			
	S4	0.773			
	S5	0.812			
WA (Wealth accumulation)	WA1	0.763	0.886	0.917	0.689
	WA2	0.777			
	WA3	0.862			
	WA4	0.877			
	WA5	0.865			

Notes. LOCs= Lower order constructs; CA=Cronbach's alpha; CR=Composite reliability; AVE=Average variance extracted

Table 2

Fornell-Larcker Criterion for LOC discriminant validity assessment

	ES	FA	FB	FK	I	MA	S	WA
ES	0.910							
FA	0.035	0.828						
FB	0.212	0.521	0.760					
FK	0.278	0.277	0.532	0.779				
I	0.288	0.086	0.308	0.391	0.807			
MA	0.258	0.225	0.532	0.273	0.362	0.875		
S	0.253	0.330	0.531	0.338	0.255	0.683	0.755	
WA	0.074	0.561	0.424	0.332	0.369	0.249	0.231	0.830

Stage 2: Assessment Of the HOC Measurement Model

Latent variable scores of the LOCs in the first stage were used as indicators to draw the HOC measurement model (Sarstedt et al., 2019). The HOC measurement model is evaluated similarly to the LOC model; hence, internal consistency, convergent validity and discriminant validity were observed. The composite reliability of both HOCs was met. Meanwhile, Cronbach's alpha for personal financial management was slightly below the cut-off value 0.7. However, according to Churchill (1979), a Cronbach's alpha

above 0.6 is still considered acceptable. Hence, the internal consistency of the HOC measurement model was achieved.

Convergent validity for the HOC measurement model was established, with both factor loadings and AVE values meeting the required cut-off thresholds of 0.6 and 0.5, respectively, for both HOCs. Table 3 presents the results for the internal consistency and convergent validity of the model.

As in the first stage, the discriminant validity of the HOCs was assessed using the Fornell-Larcker Criterion (1981).

Table 3

Factor loadings, reliability, and validity of HOC

HOC	Indicators	Loadings (>0.6)	CA (>0.7)	CR (>0.7)	AVE (>0.5)
Financial Literacy	FA	0.702	0.705	0.835	0.630
	FB	0.898			
	FK	0.769			
Personal Financial Management	I	0.647	0.690	0.812	0.523
	MA	0.810			
	S	0.784			
	WA	0.633			

Notes. HOCs=Higher order constructs; CA=Cronbach's alpha; CR=Composite reliability; AVE=Average variance extracted

As shown in Table 4, the square root of the AVE for each HOC exceeds its highest correlation with other HOCs. Thus, discriminant validity between the HOCs has been established, allowing for the structural model assessment. The HOC measurement model is demonstrated in Figure 2.

Table 4
Fornell-Larcker Criterion for HOC discriminant validity assessment

	ES	FL	PFM
ES	0.910		
FL	0.233	0.794	
PFM	0.300	0.648	0.723

Structural Model Assessment

Path Analysis

SmartPLS 4 was used to conduct bootstrapping, allowing for the estimation of path coefficients and testing the significance of the hypothesized relationships. H_1 evaluates the association between financial literacy and the entrepreneurial spirit of

accounting undergraduates. The results in Table 5 indicate that the relationship between accounting undergraduates' financial literacy and entrepreneurial spirit is insignificant ($\beta=0.067$, $t=0.100$, $p=0.503$). Hence, H_1 was not supported.

H_2 explores the connection between financial literacy and personal financial management among accounting undergraduates. The findings reveal a positive and significant relationship between financial literacy and personal financial management ($\beta=0.648$, $t=14.629$, $p=0.000$). Hence, H_2 was supported.

H_3 investigates how personal financial management influences the entrepreneurial spirit of accounting undergraduates. Findings reveal a significant and positive relationship between personal financial management and entrepreneurial spirit among accounting undergraduates ($\beta=0.256$, $t=2.582$, $p=0.010$). Hence, H_3 was also supported. Table 5 presents the results, while Figure 3 illustrates the structural model.

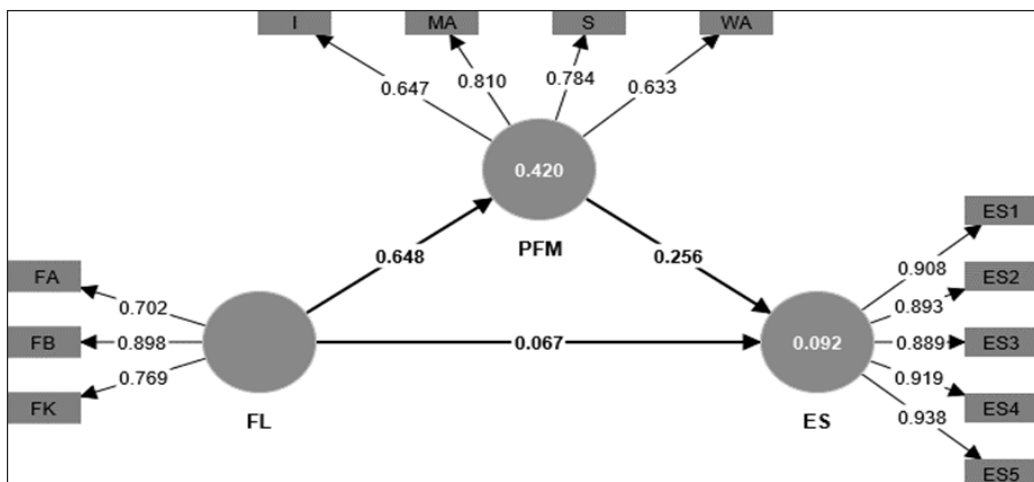


Figure 2. HOC Measurement models

Table 5
Path analysis results

	β	Standard deviation	T statistics	p-values
H1: FL -> ES	0.067	0.100	0.669	0.503
H2: FL - > PFM	0.648	0.044	14.629	0.000
H3: PFM - > ES	0.256	0.099	2.582	0.010

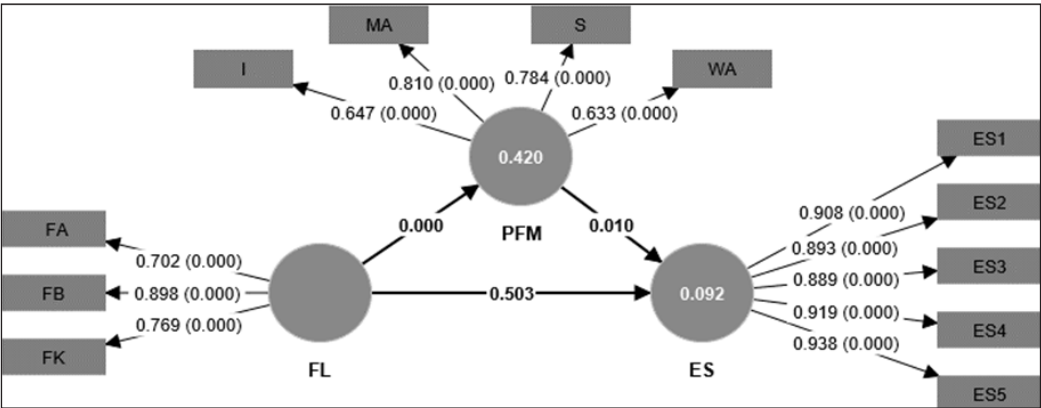


Figure 3. Structural model

Mediation Analysis

A mediation model suggested by Zhao et al. (2010) was adapted in accordance with the variables of this study, as depicted in Figure 4. The model outlines the path relations of P1, P2 and P3 that refer to the mediation model between financial literacy, personal

financial management and entrepreneurship spirit. Mediation effects were analyzed through the mediation analysis procedure by Hair et al. (2017), as demonstrated in Figure 5.

According to Figure 5, the initial analysis observes the importance of

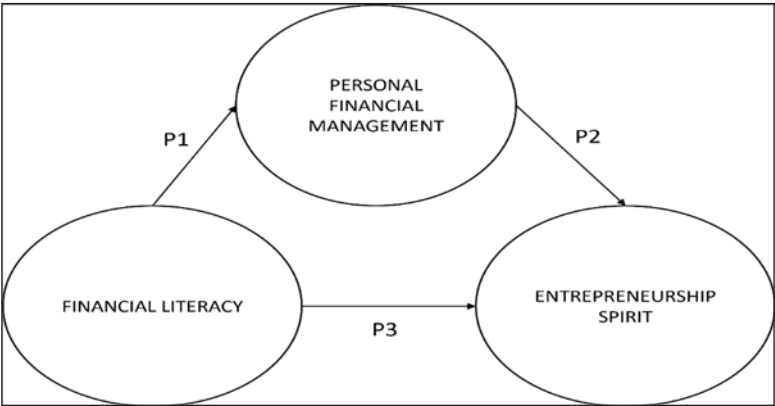


Figure 4. Mediation model (Source: Zhao et al., 2010)

financial literacy's indirect effect on the spirit of entrepreneurship (P1.P2) through personal financial management, which is the mediator variable. The results presented in Table 6 indicate that the indirect effects are significant ($\beta = 0.166$, $t = 2.402$, $p = 0.016$). The next step involved assessing the significance of the direct effect between financial literacy and entrepreneurial spirit, revealing that the direct effect is not significant ($\beta = 0.067$, $t = 0.669$, $p = 0.503$). Based on the significance of indirect effects and insignificance of the direct effects, it is concluded in accordance with Figure 5 that personal financial management has a

full mediating effect on the link between financial literacy and entrepreneurial spirit. Hence, H_4 was supported. Figures 4 and 5, including Table 6, are defined as follows.

DISCUSSION

Financial Literacy in Relation to Entrepreneurship Spirit

The first hypothesis suggested that financial literacy is significantly and positively related to entrepreneurial spirit. Findings revealed otherwise, suggesting an insignificant relationship between the two. Hence, although accounting undergraduates demonstrate an elevated level of financial

Table 6
Results of mediation analysis

	Coefficient	T-value	p-value
Indirect Effect (P1.P2)	0.166	2.402	0.016
Direct Effect (P3)	0.067	0.669	0.503
Total Effect (P1.P2.P3)	0.233	3.709	0.000

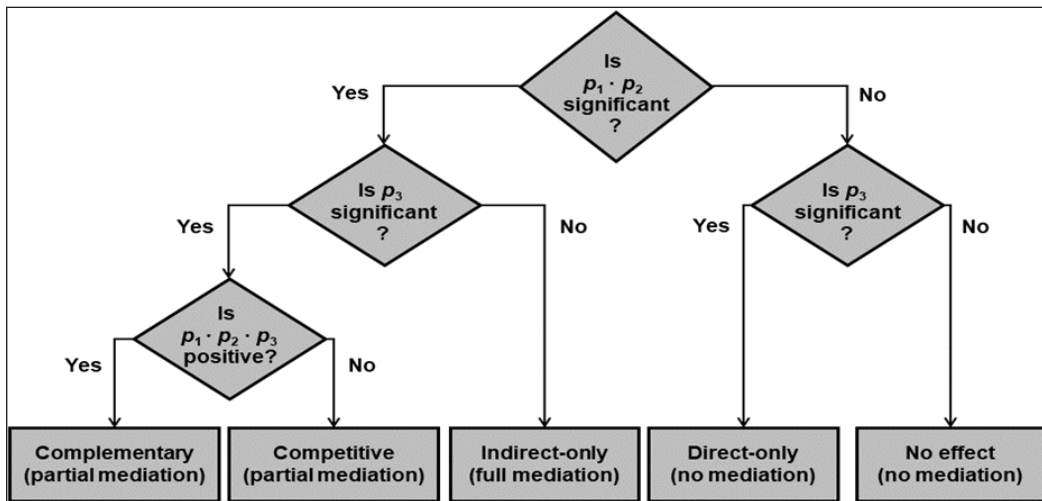


Figure 5. Mediation analysis procedure (Source: Hair et al., 2017)

literacy, it is not considered an indicator that can ignite the youth entrepreneurship spirit due to the insignificant relationship. This finding is consistent with a recent study by Alshebami and Al Marri (2022), where the entrepreneurship intention of students deemed potential entrepreneurs did not develop through financial literacy.

The results contrasted the literature findings where financial literacy and entrepreneurship intention are positively related (Ahmad et al., 2019; Bayrakdaroglu & Bayrakdaroglu, 2017; Bilal et al., 2020). The disparity in results could be attributed to external factors such as structural and financial support, regardless of the youths' interest and ability (being financially literate) to become entrepreneurs. Structural support, such as government interventions, can effectively give the youth greater perceived behavioral control over venture creation (Youssef et al., 2021), leading to developing entrepreneurial intention.

Further, financial assistance, a form of comprehensive structural support, can provide the youth with a conducive ecosystem to empower them to become potential entrepreneurs. This was evidenced in the study by Hassan et al. (2020), where financial support was an important factor in shaping the entrepreneurial attitude of Malaysian youth and, hence, increasing their entrepreneurial spirit. Nevertheless, entrepreneurs generally face issues such as difficulty in obtaining funds and not knowing how to access them, regardless of the availability of financial assistance (MEDAC, 2019). This situation makes it

harder for youth to obtain initial capital for their start-up since the majority do not have a stable income that can guarantee a return on investment. Compared to adults, the youth are also less likely to have access to formal financial services (Amari et al., 2020). Essentially, these findings indicate that the youth face difficulty in obtaining funds and have limited financial assistance available for them in venture creation (Youssef et al., 2021). For these reasons, the youth's entrepreneurial spirit may be more affected by funds than their financial ability to manage a business.

Looking at a more detailed perspective, a few observations were drawn from the statistical findings of the elements of financial literacy. In regard to financial knowledge, accounting undergraduates demonstrate a high consciousness of the financial movements in the economy. However, their awareness of the financial movements in the economy leaned more towards personal financial changes rather than the financial changes of other entities or bodies. This suggests that they lack business financial knowledge, which may contribute to their disinterest in entrepreneurship.

Further, across all items, accounting undergraduates generally show positive financial behavior. However, they demonstrate a lack of determination to achieve their long-term financial goals, which could threaten the going concern of their enterprise should they venture into entrepreneurship. Their lack of dedication to attain long-term goals may hamper their willingness to become entrepreneurs since

entrepreneurs need to be highly driven and motivated to achieve long-term goals. Lastly, the undergraduates scored high for all items of financial attitude, indicating a positive attitude. Financial knowledge and behavior impacted financial literacy the most among the three elements. Hence, their roles in igniting the spirit of entrepreneurship can be enhanced through education to increase youth participation.

Mediating Effects of Personal Financial Management on the Relationship Between Financial Literacy and Entrepreneurship Spirit

The mediation analysis results indicated that personal financial management completely mediates the relationship between financial literacy and entrepreneurial spirit. This result is derived from the significant indirect effects of personal financial management on the association between financial literacy and entrepreneurship spirit, including the insignificant direct effect of financial literacy on entrepreneurship spirit. In other words, full mediation of personal financial management takes place due to the insignificance of the direct path of financial literacy and entrepreneurship spirit.

According to Hair et al. (2017), a mediator variable is expected to reflect the changes in the independent variable and affect the result of the dependent variable. This is identical to the findings of this study, which found the significance of the relation between financial literacy and entrepreneurship spirit only when personal financial management is assigned

as a mediator of the linear relationship. Consequently, accounting undergraduates with a high level of financial literacy are better equipped to manage personal wealth effectively, enhancing their entrepreneurial spirit.

The strong relationship between financial literacy and personal financial management has been supported by scholars in the literature, particularly in areas such as saving (Amari et al., 2020; Nguyen & Doan, 2020), investment (Bazkiaei et al., 2021; Khan et al., 2019), money attitude (Abdullah et al., 2019), and wealth accumulation (Sekita et al., 2018). This could be attributed to their enhanced level of financial literacy, which allows them to utilize their financial knowledge to make informed financial decisions (Ergun et al., 2018). Conversely, individuals with lower financial literacy risk becoming financially fragile (Shen et al., 2016). In addition, accounting undergraduates are also exposed to financial and management courses, raising their recognition of the value of financial management.

Moreover, the significant relationship between personal financial management and the spirit of entrepreneurship aligns with the literature, indicating that saving, investment, money attitude, and wealth accumulation can increase the spirit of entrepreneurship. Good saving behavior instills healthy saving habits in individuals, allowing them to build initial capital to start a new business (Rikwentishe et al., 2015), which increases their confidence and inclination toward becoming entrepreneurs. Possessing investment knowledge at a

personal level is good exposure to making advantageous investment decisions related to additional business capital or business expansion. Meanwhile, a positive attitude towards money effectively shapes one's way of managing their income (Abdullah et al., 2019), which can enhance their financial well-being and, eventually, the finances of a business. Strategic wealth accumulation can help individuals plan for retirement and, in the same sense, be advantageous for managing enterprise assets.

CONCLUSION

Results indicated that accounting undergraduates' financial literacy had no significant impact on their entrepreneurial spirit. Nevertheless, personal financial management acted as a full mediator in the link between financial literacy and entrepreneurial spirit. The result implies that enhanced financial literacy can improve personal financial management among the youth, thereby elevating their entrepreneurial spirit.

The implication of the findings led to recommendations for related authorities to enhance entrepreneurship education at the tertiary level. Relevant bodies should work on refining entrepreneurship education to emphasize both the development of young entrepreneurial traits and the management of personal finances. The theoretical contribution of this research lies in its proposed enhancement of the Theory of Planned Behavior (TPB) by incorporating personal financial management as a mediating factor in the relationship between

financial literacy and entrepreneurship spirit. This approach aligns with recent findings highlighting the need for mediating variables in TPB to better capture complex relationships in behavioral studies (Hair et al., 2017; Zhao et al., 2010). The results reveal that financial literacy alone does not directly inspire the entrepreneurial spirit; rather, it influences the entrepreneurial spirit indirectly through improved personal financial management skills. This insight expands TPB by introducing an additional pathway for understanding entrepreneurial motivation, highlighting the importance of financial management as a foundational skill that enables financial literacy to translate into entrepreneurial aspirations (Alshebami & Al Marri, 2022; Hassan et al., 2020). This framework can better explain how financial education initiatives might foster entrepreneurship, particularly in the context of youth and emerging entrepreneurs.

Furthermore, this study suggests that the Ministry of Higher Education (MOHE), in collaboration with higher education institutions, can enhance this finding by refining entrepreneurship courses and integrating elements of personal financial management (such as savings, investment, money attitude, and wealth accumulation) into the financial aspects of these courses. This approach is expected to give the youth wider exposure to ways to direct their finances towards new venture creation. As a result, the youth may prosper in their financial well-being. At the same time, they should strategize utilizing their finances as capital for their business start-up. Hence,

more youth will be expected to dive into entrepreneurship and fulfill Malaysia's goal to transform into an entrepreneurial nation by 2030.

Limitations and Recommendations for Future Research

The study concentrated exclusively on accounting undergraduates from seven public universities in Malaysia. While this provides insights into this specific group, it limits the generalizability of the findings to other student populations or working adults. Therefore, future research should explore a more diverse sample that includes students from different academic disciplines, working professionals, or entrepreneurs themselves to improve generalizability. Conducting longitudinal studies could offer deeper insights into how financial literacy, personal financial management, and entrepreneurial spirit develop over time and in different contexts. Future research could explore other factors mediating financial literacy and entrepreneurial spirit, such as access to financial resources, mentorship programs, or digital literacy. These limitations and recommendations highlight the need for broader research approaches to better understand the complex dynamics between financial literacy, personal financial management, and entrepreneurship.

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REFERENCES

- Abd Rahman, N. H., Ismail, S., Ridzuan, A. R., & Abd Samad, K. (2020). The issue of graduate unemployment in Malaysia: Post Covid-19. *International Journal of Academic Research in Business and Social Sciences*, 10(10), 834-841. <https://doi.org/10.6007/IJARBSS/v10-i10/7843>
- Abdullah, N., Fazli, S. M., & Muhammad Arif, A. M. (2019). The relationship between attitude towards money, financial literacy and debt management with young worker's financial well-being. *Pertanika Journal of Social Sciences & Humanities*, 27(1), 57-69.
- Adomako, S., & Danso, A. (2014). Financial literacy and firm performance: The moderating role of financial capital availability and resource flexibility. *International Journal of Management and Organizational Studies*, 3(4), 41-56.
- Ahmad, N. L., Mohd Fazil, N. F., & Abu Bakar, B. (2021). Entrepreneurship motivation among accounting students: The role of financial literacy and financial behaviour. *Jurnal Pengurusan*, 63, 141-152.
- Ahmad, N. L., Yusof, R., Ahmad, A. S. & Ismail, R. (2019). The importance of financial literacy towards entrepreneurship intention among university students. *International Journal of Academic Research in Business and Social Sciences*, 9(9), 18-39. <https://doi.org/10.6007/IJARBSS/v9-i9/6266>
- Albeerdy, M. I., & Gharleghi, B. (2015). Determinants of the financial literacy among college students in Malaysia. *International Journal of Business Administration*, 6(3), 15-24. <https://doi.org/10.5430/ijba.v6n3p15>
- Aligishiev, Z., & Gravesteyn, R. (2020). *Youth entrepreneurs engaging in the digital economy:*

- the next generation*. UN Capital Development Fund.
- Alshebami, A. S., & Al Marri, S. H. (2022). The impact of financial literacy on entrepreneurial intention: The mediating role of saving behavior. *Frontiers in Psychology*, 13, Article 911605. <https://doi.org/10.3389/fpsyg.2022.911605>
- Amari, M., Salhi, B., & Jarboui, A. (2020). Evaluating the effects of sociodemographic characteristics and financial education on saving behavior. *International Journal of Sociology and Social Policy*, 40(11/12), 1423-1438. <https://doi.org/10.1108/IJSSP-03-2020-0048>
- Atkinson, A., & Messy, F. (2012). *Measuring financial literacy: Results of the OECD/International Network on Financial Education (INFE) Pilot study* (Working Papers on Finance, Insurance and Private Pensions No. 15) OECD Publishing. <https://doi.org/10.1787/5k9csfs90fr4-en>
- Bayrakdaroglu, A., & Bayrakdaroglu, F. (2017). A comparative analysis regarding the effects of financial literacy and digital literacy on internet entrepreneurship intention. *Journal of Entrepreneurship and Development*, 12(2), 23-40.
- Bazkiaei, H. A., Khan, N. U., Irshad, A.-u., & Ahmed, A. (2021). Pathways toward entrepreneurial intention among Malaysian universities' students. *Business Process Management Journal*, 27(4), 1009-1032. <https://doi.org/10.1108/BPMJ-01-2021-0021>
- Bilal, M. A., Khan, H. H., Irfan, M., Ul Haq, S. M. N., Ali, M., Kakar, A., Rauf, A. (2020). Influence of financial literacy and educational skills on entrepreneurial intent: Empirical evidence from young entrepreneurs of Pakistan. *The Journal of Asian Finance, Economics and Business*, 8(1), 697-710. <https://doi.org/10.13106/jafeb.2021.vol8.no1.697>
- Churchill, G. A., Jr. (1979). A paradigm for developing better measures of marketing constructs. *Journal of Marketing Research*, 16(1), 64-73. <https://doi.org/10.2307/3150876>
- Ergun, S., Çinko, M., Avci, E., & Tekçe, M. (2018). An analysis on the relationship between financial literacy and entrepreneurial intention: Evidence from Turkish university students. In J. Vopava, V. Douda, R. Kratochvil, & M. Konecki (Eds.), *Proceedings of MAC 2018 in Prague* (pp. 25-33). MAC Prague consulting s.r.o.
- Fatoki, O. (2014). The financial literacy of micro entrepreneurs in South Africa. *Journal of Social Sciences*, 40(2), 151-158.
- Fornell, C., & Larcker, D. F. (1981). Structural equation models with unobservable variables and measurement error: Algebra and statistics. *Journal of Marketing Research*, 18(3), 382-388. <https://doi.org/10.2307/3150980>
- Hair, J. F., Hult, T. M., Ringle, C. M., & Sarstedt, M. (2018). *A Partial Least Squares Structural Equation Modeling (PLS-SEM; 2nd ed.)*. Thousand Oaks.
- Hair, J. F., Jr., Sarstedt, M., Ringle, C. M., & Gudergan, S. P. (2017). *Advanced issues in partial least squares structural equation modeling*. Sage Publications.
- Hassan, H., Sade, A. B., & Rahman, M. S. (2020). Shaping entrepreneurial intention among youngsters in Malaysia. *Journal of Humanities and Applied Social Sciences*, 2(3), 235-251. <https://doi.org/10.1108/JHASS-02-2020-0029>
- Isomidinova, G., Singh, J. S. K., & Singh, K. (2017). Determinants of financial literacy: A quantitative study among young students in Tashkent, Uzbekistan. *Electronic Journal of Business & Management*, 2(1), 61-75.
- Janposri, P. (2021). The role of financial literacy in retirement planning and wealth accumulation among self-employed Thai workers. *Journal of Population and Social Studies*, 29, 177-194. <https://doi.org/10.25133/JPSSv292021.011>

- Kadoya, Y., & Khan, M. S. R. (2020). Financial literacy in Japan: New evidence using financial knowledge, behavior, and attitude. *Sustainability*, 12(9), Article 3683. <https://doi.org/10.3390/su12093683>
- Kadoya, Y., Khan, M. S. R., Hamada, T., & Dominguez, A. (2018). Financial literacy and anxiety about life in old age: Evidence from the USA. *Review of Economics of the Household*, 16, 859-878. <https://doi.org/10.1007/s11150-017-9401-1>
- Kassim, A. A. M., Tamsir, F., Azim, Z. A. Z., Mohamed, J., & Nordin, H. N. M. (2020). Students' saving behaviour: Do demographic profile, parents' background and financial literacy matter? An empirical study in private universities in Selangor. *International Journal of Psychosocial Rehabilitation*, 24(1), 844-849.
- Ketkaew, C., Van Wouwe, M., Vichitthamaros, P., & Teerawanviwat, D. (2020). The effect of expected income on wealth accumulation and retirement contribution of Thai wagedworkers. *SAGE Open*, 9(4). <https://doi.org/10.1177/2158244019898247>
- Khan, M. T. I., Tan, S. H., & Gan, G. G. (2019). Advanced financial literacy of Malaysian Gen Y investors and its consequences. *Margin*, 13(1), 83-108. <https://doi.org/10.1177/0973801018800085>
- Kloepfer, K., & Castrogiovanni, G. J. (2018). Entrepreneurship: Venture creation subprocesses, subdomains, and interfaces. *International Entrepreneurship and Management Journal*, 14, 681-696. <https://doi.org/10.1007/s11365-018-0508-5>
- Li, R., & Qian, Y. (2019). Entrepreneurial participation, and performance: The role of financial literacy. *Management Decision*, 58(3), 583-599. <https://doi.org/10.1108/MD-11-2018-1283>
- Liñán, F., & Chen, Y. W. (2009). Development and cross-cultural application of a specific instrument to measure entrepreneurial intentions. *Entrepreneurship Theory and Practice*, 33(3), 593-617. <https://doi.org/10.1111/j.1540-6520.2009.00318.x>
- Lok, S. Y. P., Ying, C. W., & Wei, L. H. (2017). A framework for retirement planning based on financial literacy and wealth accumulation. In K. Cermakova & J. Rotschedl (Eds.), *Proceedings of the 6th Business & Management Conference, Geneva* (pp. 142-151). <https://doi.org/10.20472/BMC.2017.006.012>
- Malaysian Department of Insolvency. (2019). *Bankruptcy Statistic 2019*. <https://www.mdi.gov.my/index.php/legislation/bankruptcy>
- Meghana, M., & Sarala, K. (2020). Financial literacy and personal financial management – a review of 21st works. *Journal of Critical Reviews*, 7(13), 34-57.
- Ministry of Entrepreneur Development and Cooperatives. (2019). *National Entrepreneurship Policy Malaysia: An Outstanding Entrepreneurial Nation 2030*. <https://www.kuskop.gov.my/admin/files/med/image/portal/NEP2030-Final.pdf>
- Murendo, C., & Mutsonziwa, K. (2017). Financial literacy and savings decisions by adult financial consumers in Zimbabwe. *International Journal of Consumer Studies*, 41(1), 95-103. <https://doi.org/10.1111/ijcs.12318>
- Murugiah, L. (2016). The level of understanding and strategies to enhance financial literacy among Malaysian. *International Journal of Economics and Financial Issues*, 6(3), 130-139.
- Nguyen, V. T., & Doan, M. D. (2020). The correlation between financial literacy and personal saving behavior in Vietnam. *Asian Economic and Financial Review*, 10(6), 590-603. <https://doi.org/10.18488/journal.aefr.2020.106.590.603>
- Oggero, N., Rossi, M. C., & Ughetto, E. (2020). Entrepreneurial spirits in women and men. The role of financial literacy and digital skills. *Small*

- Business Economics*, 55, 313-327. <https://doi.org/10.1007/s11187-019-00299-7>
- Qamar, M. A. J., Khemta, M. A. N., & Jamil, H. (2016). How knowledge and financial self-efficacy moderate the relationship between money attitudes and personal financial management behavior. *European Online Journal of Natural and Social Sciences*, 5(2), 296-308.
- Rehman, K., & Mia, M. D. (2024). Determinants of financial literacy: A systematic review and future directions. *Future Business Journal*, 10, Article 75. <https://doi.org/10.1186/s43093-024-00365-x>
- Rikwentishe, R., Pulka, B. M., & Msheliza, S. K. (2015). The effects of saving and saving habits on entrepreneurship development. *European Journal of Business and Management*, 23(7), 111-119.
- Ripain, N., Amirul, S. M., & Mai, R. (2017). Financial literacy and SMEs' potential entrepreneurs: The case of Malaysia. *Journal of Administrative and Business Studies*, 3(2), 60-68. <https://doi.org/10.20474/jabs-3.2.1>
- Sadiq, M. N., & Khan, R. A. A. (2019). Impact of personality traits on investment intention: The mediating role of risk behaviour and the moderating role of financial literacy. *Journal of Finance and Economics Research*, 4(1), 1-18.
- Sailaja, V. N., & Madhavi, N. B. (2016). Relationship between retirement wealth and householders' personal financial and investment behavior. *Man in India*, 96(5), 1521-1529.
- Salikin, N., Ab Wahab, N., & Muhammad, I. (2014). Strengths and weaknesses among Malaysian SMEs: Financial management perspectives. *Procedia Social & Behavioral Sciences*, 129, 334-340. <https://doi.org/10.1016/j.sbspro.2014.03.685>
- Sarstedt, M., Hair, J. F., Jr, Cheah, J. H., Becker, J. M., & Ringle, C. M. (2019). How to specify, estimate, and validate higher-order constructs in PLS-SEM. *Australasian Marketing Journal*, 27(3), 197-211. <https://doi.org/10.1016/j.ausmj.2019.05.003>
- Sekita, S., Kakkar, V., & Ogaki, M. (2018). *Wealth, financial literacy and behavioral biases: Evidence from Japan* (Keio-IES Discussion Paper Series No. DP2018-023). Institute for Economics Studies, Keio University. <https://ies.keio.ac.jp/upload/pdf/en/DP2018-023.pdf>
- Shen, C. H., Lin, S. J., Tang, D. P., & Hsiao, Y. J. (2016). The relationship between financial disputes and financial literacy. *Pacific-Basin Finance Journal*, 36, 46-65. <https://doi.org/10.1016/j.pacfin.2015.11.002>
- Shockey, S. S. (2002). *Low-wealth adults' financial literacy, money management behaviors, and associated factors, including critical thinking* [Doctoral dissertation, The Ohio State University]. http://rave.ohiolink.edu/etdc/view?acc_num=osu1486402544590666
- Singh, A., & Masuku, M. (2014). Sampling techniques & determination of sample size in applied statistics research: An overview. *International Journal of Commerce and Management II*, (11), 1-22.
- Stoica, O., Roman, A., & Rusu, V. D. (2020). The nexus between entrepreneurship and economic growth: A comparative analysis on groups of countries. *Sustainability*, 12(3), Article 1186. <https://doi.org/10.3390/su12031186>
- Suparno, S., & Saptono, A. (2018). Entrepreneurship education and its influence on financial literacy and entrepreneurship skills in college. *Journal of Entrepreneurship Education*, 21(4), 1-11.
- Usama, K. M., & Yusoff, W. F. W. (2018). The relationship between entrepreneurs' financial literacy and business performance among entrepreneurs of Bauchi State Nigeria. *International Journal of Entrepreneurship and Business Innovation*, 1(1), 15-26.

- van Rooij, M. C., Lusardi, A., & Alessie, R. J. (2012). Financial literacy, retirement planning and household wealth. *The Economic Journal*, 122(560), 449-478. <https://doi.org/10.1111/j.1468-0297.2012.02501.x>
- Wu, B. (2011). 4—Consumption and economic law. In *Consumption and Management: New Discovery and Applications* (pp. 61-97). Chandos Publishing. <https://doi.org/10.1016/B978-1-907568-07-7.50004-3>
- Xiao, J. J., & Tao, C. (2020). Consumer finance/ household finance: The definition and scope. *China Finance Review International*, 11(1), 1-25. <https://doi.org/10.1108/CFRI-04-2020-0032>
- Youssef, A. B., Boubaker, S., Dedaj, B., & Carabregu-Vokshi, M. (2021). Digitalization of the economy and entrepreneurship intention. *Technological Forecasting and Social Change*, 164, Article 120043. <https://doi.org/10.1016/j.techfore.2020.120043>
- Zaidi, A. Z. A., & Tahir, N. S. (2019). Factors that influence investment decision making among potential individual investors in Malaysia. *Advances in Business Research International Journal*, 5(1), 9-21.
- Zaimovic, A., Torlakovic, A., Arnaut-Berilo, A., Zaimovic, T., Dedovic, L., & Meskovic, M. M. (2023). Mapping financial literacy: A systematic literature review of determinants and recent trends. *Sustainability*, 15(12), Article 9358. <https://doi.org/10.3390/su15129358>
- Zhao, H., Seibert, S. E., & Lumpkin, G. T. (2010). The relationship of personality to entrepreneurial intentions and performance: A meta-analytic review. *Journal of Management*, 36(2), 381-404. <https://doi.org/10.1177/0149206309335187>

APPENDIX

Measurement Items for Financial Literacy and Entrepreneurship Spirit

Details		
S	S1	I save money because it is important for my future.
	S2	I make consistent savings because I plan my monthly expenses.
	S3	I make an effort to save even if my income/allowance is low.
	S4	I put money aside to use later for a specific purpose (emergencies, car maintenance, traveling purposes)
	S5	I immediately put some money aside when I receive my income/allowance.
I	I1	I believe it is important to invest some amount of money in securities (stocks, mutual funds, bonds)
	I2	I prefer to invest in securities rather than leaving my money in a savings account.
	I3	I have the knowledge to invest in security markets.
	I4	I am confident in making successful investment decisions.
	I5	I diversify my investments in multiple securities and assets to obtain higher returns and reduce risks.
MA	MA1	I think that owning money is a good indicator of a person's success.
	MA2	I am good at managing my money.
	MA3	I tend to be worried about how much money I have.
	MA4	I enjoy buying expensive products to impress others.
	MA5	I am proud of my ability to save money.
WA	WA1	I believe personal property acquisition should be encouraged in today's society to accumulate wealth (personal properties, monetary funds, real estate, bonds and stocks).
	WA2	I believe good saving behavior can lead to successful accumulation of wealth (personal properties, monetary funds, real estate, bonds and stocks).
	WA3	I believe that investing in personal properties, monetary funds, real estate, bonds, and stocks creates wealth accumulation.
	WA4	I believe accumulating wealth (personal properties, monetary funds, real estate, bonds, and stocks) can lead to financial independence.
	WA5	I believe that financial literacy is important for achieving financial independence.
FK	FK1	I am aware of the different financial products offered by financial institutions.
	FK2	I am well-informed about financial changes in the economy (interest rates, cost of borrowing, tax rates)
	FK3	I have the knowledge to keep track of new business financing options.
	FK4	I am aware of what inflation does to the value of money over time.
	FK5	I am aware of the different credit agreements (credit cards, personal loans, and mortgages) available in the market.
FB	FB1	I always make sure I spend according to my budget.
	FB2	I always make careful considerations before I buy something to ensure I can afford it.
	FB3	I always pay my bills on time.
	FB4	I set long-term financial goals and work hard to achieve them.
	FA1	I believe it is more satisfying to spend money than to save it for long-term purposes.

Details		
FA	FA2	I think money is there to be spent.
	FA3	The way I manage my money today will affect my future.
	FA4	I believe it is important to follow a monthly expense plan.
ES	ES1	I firmly intend to establish my own business after I graduate.
	ES2	I will work hard to start my own business.
	ES3	My ambition is to become an entrepreneur.
	ES4	I have seriously thought about starting my own business.
	ES5	I am determined to create a business in the future.

**Note.* S=Saving, I=Investment, MA=Money Attitude, WA=Wealth Accumulation, FA=Financial Knowledge, FB= Financial Behavior, FA= Financial attitude, ES= Entrepreneurship Spirit