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The determinants of financial planning among youths in Sabah

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Abstract

This study explores the relationship between digital financial literacy and financial attitude to financial planning, with the target population being the youths residing in Malaysia. Questionnaires adopted from past literature were distributed to gather relevant data from the target population, and 300 respondents participated in this study. The results show that digital financial literacy and attitude positively relate to financial planning. Meanwhile, digital financial literacy did not moderate the relationship between financial attitude and financial planning. This study's limitations include omitting other variables, such as behavioural and socio-demographic factors, that may affect financial planning and need to be considered to present a more comprehensive research framework and provide more accurate findings. Lastly, this research guides the relevant authorities in reviewing the country's sufficiency and effectiveness of financial education.

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1. Introduction

Among Malaysia's population, the youth are the most vulnerable regarding financial issues. Youth are commonly linked to the impact of the recent unprecedented economic crisis (e.g., the 2009 recession and the COVID-19 pandemic), where many struggle financially. Reports indicated that 23.79 % and 18.94% of youth have suffered mild (less than 50%) and significant (more than 50%) wage reductions, respectively (Research for Social Advancement, 2020). The issue is also pronounced among rural youth. These economic crises affect youth's income and living costs and, eventually, their propensity for future financial commitment. Only 17% of the income is dedicated to saving and future investment, while 66% is spent on necessities (Securities Commission Malaysia, 2022). This situation is calling for more effort to understand and develop financial planning policies for Malaysian youth

From the perspective of policymakers, identifying key factors of financial planning is the first foundation of proper and reliable policies. Empirical research shows that good money management (Bongini & Cucinelli, 2019), developing and having financial goals (Sin et al., 2019), income (Goda et al., 2014), financial knowledge (Adam et al., 2017; Boisclair et al., 2017; Tan & Singaravelloo, 2020) and financial advisor services (Fox & Bartholomae, 2020) are significantly important in making financial plan. As financial planning developed, other determinants, such as financial attitude and digital financial literacy, became more relevant than ever. Digital financial literacy, a new discipline, refers to the skills of using financial products and services digitally. Nowadays, there are abundant digital tools and assets to help tailor a comprehensive financial plan and having the necessary knowledge and skills is an advantage.

On the other hand, financial attitude is the preference and engagement towards finance matters. Individuals with higher financial attitudes are less likely to use credit cards (Normawati et al., 2021), suggesting an increased propensity for savings and future commitment. However, the influence of these determinants on Malaysian youth is unclear. According to the author, there is a limited study of financial attitudes and digital financial literacy in financial planning among youth. Hence, this study addressed the limitation and provided empirical evidence of the relationship between the disciplines. The study's research objectives are 1) to identify the determinants of financial planning and 2) to examine the relationship of determinants of financial planning.

The paper comprises three sections: the first section focuses on the introduction and literature reviews, the second section focuses on methodology, and the third focuses on data analysis and findings.

2. Literature review

The literature review is essential to correctly position the paper's contribution and not only as a compulsory section of an article. This section briefly discusses the literature review of each variable in the study. The flow of ideas begins with financial attitude, digital financial literacy and financial planning.

2.1. Financial attitude

As a concept, financial attitude emphasises financial issues to their future. Individuals with high financial attitudes are more likely to engage in financial issues and implement them in their money management practices (Normawati et al., 2021). For illustration, individuals who value long-term plans are more likely to initiate and accumulate savings. In other words, financial attitude reflects the individual desire, which later on plays an essential role as a guideline in shaping a plan. From the financial planning perspective, youth tend to have low financial attitudes (Garg & Singh, 2018), so this study expected low financial planning among youth in Malaysia. This study proposed a hypothesis:

H1: Financial attitude has a positive effect on financial planning

2.2. Digital financial literacy

Recent digitalisation has exposed consumers to new risks such as phishing, financial scams and fraud due to new products and services. The situation raises the recognition of digital financial literacy to promote digital risk and awareness of new financial innovation. Four main dimensions are proposed: knowledge of digital financial products and services, awareness of digital financial risks, digital financial risk control, consumer rights and redress procedures (Morgan & Trinh, 2019). This paper described digital financial literacy as the ability to properly use digital products and services and be aware of the risks involved.

So far, digital financial literacy is linked to financial management behaviour and financial attitude (Normawati et al., 2021). From the financial planning perspective, the impact of digital financial literacy remains unclear as the discipline is still relatively new. A proxy finding by Verkijika (2019) demonstrates that individuals aware of anti-phishing self-efficacy are more likely to put effort into preventing phishing. The results suggest that understanding digital financial literacy makes individuals more mindful of digital risk and positively impacts a financial plan. Hence, this study proposed a hypothesis verifying this claim in the Malaysian youth context.

H2: Digital financial literacy has a positive effect on financial planning

Previous literature has indicated that knowledge empirically affects attitude in financial decisions. For instance, Nadeem et al. (2020) found that financial knowledge positively moderated the relationship between money attitudes and stock market participation. Additionally, Akhter and Hoque (2022) indicate the moderating role of financial literacy toward attitude and investment intention. Having a sufficient understanding of a matter strengthens one's attitude toward it. Similarly, this paper expects that the knowledge of using digital products and services affects financial attitudes towards financial planning. Thus, this paper proposed a moderation hypothesis:

H3: Digital financial literacy moderates the relationship between financial attitude and financial planning

2.3. Financial planning

Financial planning is commonly linked to retirement and among the older population. Yet the matter is now crucial for the younger generation with different. The young must develop skills and attitudes to plan for retirement, manage short and medium expenses, and figure out compatible pension plans that fit their lifestyle and needs (OECD, 2022). Such challenges demand more effort to strengthen financial planning among youth. This paper describes financial planning as managing resources to achieve desired financial goals.

Proper skills, attitude, behaviour, and knowledge are needed to make a sound financial plan (Agarwal et al., 2015). As the impact of digitalisation is increasingly more robust, youth also need to pay attention to digital products and services as added value and ease the financial planning process (Gan et al., 2021). As far as the literature is concerned, Malaysian youth is far from prepared. Regarding knowledge, only 36 per cent understand basic finance concepts (Lusardi & Oggero, 2017). Additionally, 34% of Malaysian youth have good financial stability and 44% struggle to meet ends (Merdeka Center, 2021). This statistic reflects their poor propensity and attitude toward finance. It is also unclear how well the youth understand the impact of digitalisation in financial planning up to the author's knowledge. The current study only focuses on farmers (Liew et al., 2020) and students (Rahim et al., 2022) in Malaysia and less on youth.

3. Methodology

The sample of the study consists of the Sabahan youths. Three hundred questionnaires were self-administered, and a purposive sampling technique was adopted in selecting the respondents.

3.1. Data collection procedure, variable measurement, and method of data analysis figures and tables

A structured self-administered questionnaire was used to collect data from the respondents. The sample of the research is the Sabahan youths. The questionnaire is based on a 5-point Likert scale ranging from strongly disagree to strongly agree. Meanwhile, the measurement to measure financial planning was adopted. Data gathered from the respondents were analysed using SPSS version 26, including descriptive and correlation analyses. First, the questionnaires were distributed to 150 respondents throughout the state of Sabah; following data cleaning, 133 questionnaires were found usable. This study applied several standard statistical tools to analyse the data. Specifically, PLS-SEM was used for this purpose. Figure 1 illustrates the proposed research framework for this study.

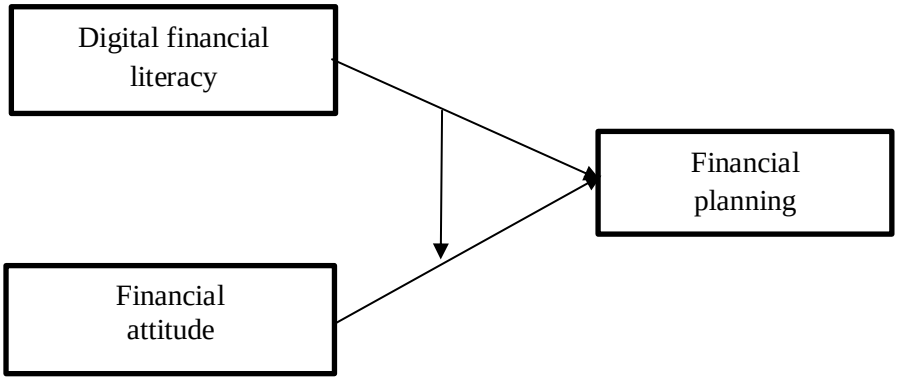

Figure 1. Research framework

4. Results and discussion

4.1. Descriptive results

Table 1. Profile of respondents

Gender	Frequency	Percent
Male	101	50.5
Female	99	49.5
Age	Frequency	Percent
20-29	172	86.0
30-39	28	14.0
Ethnicity	Frequency	Percent
Malay	47	23.5
Chinese	16	8.0
Indian	8	4.0
Sabah natives	116	58.0
Sarawak natives	3	1.5
Other	9	4.5

Religion	Frequency	Percent
Muslim	140	70.0
Christian	47	23.5
Buddhist	7	3.5
Hindu	4	2.0
Other	2	1.0
Education level	Frequency	Percent
PMR	16	8.0
SPM	64	32.0
STPM/ STAM/ A-Level/ Diploma	89	44.5
Degree	28	14.0
PhD	3	1.5
Income	Frequency	Percent
≤ RM2,500	161	80.5
RM2,501 - RM3,169	22	11.0
RM3,170 - RM3,969	12	6.0
M3,970 - RM4,849	3	1.5
RM5,880 - RM7,099	1	.5
RM8,700 - RM10,959	1	.5
Employment	Frequency	Percent
≤ 5 years	167	83.5
6-10 years	20	10.0
11- 15 years	7	3.5
≥ 16 years	6	3.0
Sector	Frequency	Percent
Civil servant	27	13.5
Private company	55	27.5
Self-employed	68	34.0
Other	50	25.0
Marital status	Frequency	Percent
Single	160	80.0
Married	32	16.0
Widow divorcee	8	4.0
Location	Frequency	Percent
Kota Kinabalu	178	89.0
Sandakan	6	3.0
Tawau	7	3.5
Other	9	4.5

4.2. Collinearity test

Because survey research is not normally distributed, the partial least squares (PLS) modelling with the SmartPLS 4.0 updated version (Ringle et al., 2020) was used as the

statistical tool to assess the measurement model and structural model. First, the researcher examined full collinearity to test for common method bias, as Kock & Lynn (2012) and Kock (2015) suggested. All variables are regressed against a common variable in this method, and if the VIF is less than 3.3, there is no bias from single-source data. The analysis produced a VIF less than that of single-source bias, indicating no significant issue with our data.

4.3. Measurement model assessment

We tested the measurement model to test the instrument's validity and reliability, following the guidelines by Hair et al. (2019) and Ramayah et al. (2018). Then, the structural model was performed to test the hypothesis developed. We assessed the loadings, average variance extracted (AVE), and composite reliability (CR) for the measurement model. The loadings values should be ≥ 0.5, AVE should be ≥ 0.5, and CR should be ≥ 0.7. As shown in Table 2, the AVE is higher than 0.5, and the CR is higher than 0.7. Convergent validity is the extent to which a measure correlates positively with an alternative measure of the same construct. We looked at the indicators' outer loadings and the AVE to evaluate convergent validity. Since business intelligence indicators items dfl2 and dfl10 were less than 0.5 AVE, the items had to be deleted, and the PLS Algorithm was rerun to analyse and recheck the result. Meanwhile, indicators with loadings lower than 0.708 can be retained when the minimum AVE result of 0.5 is achieved (Hair et al., 2019). Fig. 2 shows the graphical measurement model assessment.

Table 2. Measurement model assessment

Construct	Item	Loadings	CR	CR	AVE
Digital financial literacy	dfl1	0.831	0.935	0.946	0.688
	dfl3	0.791			
	dfl4	0.880			
	dfl5	0.874			
	dfl6	0.809			
	dfl7	0.845			
	dfl8	0.836			
	dfl9	0.762			
Financial attitude	fa1	0.787	0.919	0.933	0.635
	fa2	0.836			
	fa3	0.808			
	fa4	0.870			
	fa5	0.795			
	fa6	0.786			
	fa7	0.796			
	fa8	0.683			
Financial planning	fp1	0.892	0.932	0.942	0.604
	fp10	0.565			
	fp11	0.644			
	fp2	0.858			
	fp3	0.821			
	fp4	0.894			
	fp5	0.788			
	fp6	0.823			
	fp7	0.863			
	fp8	0.837			
	fp9	0.402			

*dfl2 & dfl10 were deleted as loading Composite Reliability < .708 (Hair et al., 2017)

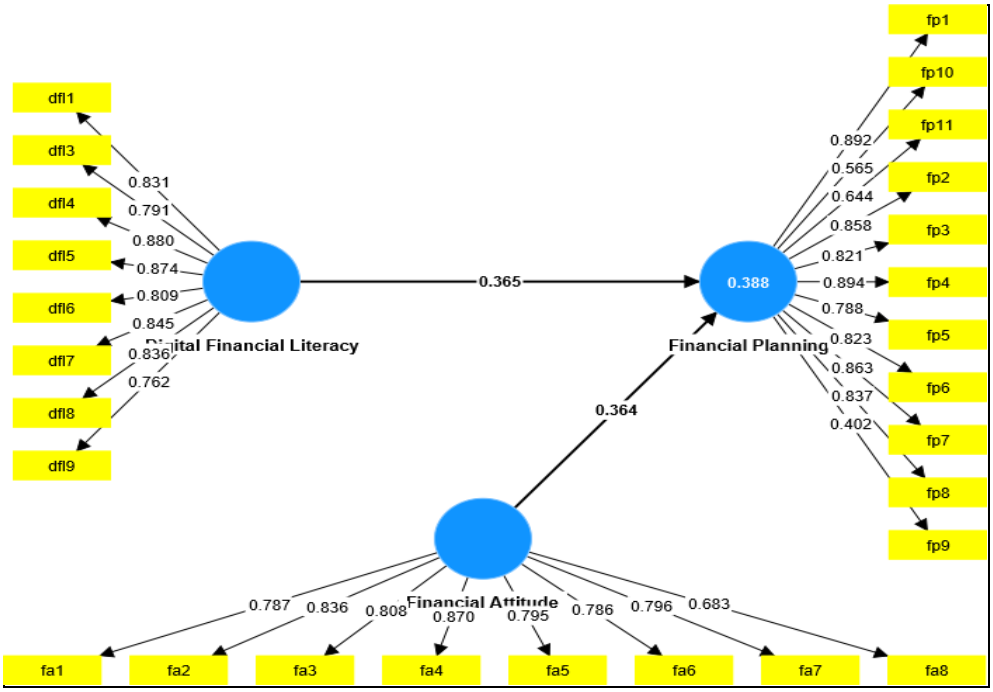

Figure 2. Measurement model

Step 2 next evaluated the discriminant validity using the HTMT criterion, as described by Hair et al. (2019) and displayed in Table 3. (Ringle et al., 2020). Discriminant validity was assessed using Henseler's (2015) Heterotrait-Monotrait ratio of correlations criterion. The results indicate that discriminant validity is well-defined at HTMT0.85 (Diamantopoulos & Siguaw, 2006), as seen in Table 6 (Ringle et al., 2020). Therefore, discriminant validity is not a concern. Since there is no multi-collinearity issue between items loaded on distinct constructs in the outer model, the data indicate that proceeding with the structural model assessment is appropriate to test the study's hypotheses.

Table 3. HTMT criterion

Construct	Digital financial literacy	Financial attitude	Financial planning
Digital financial literacy			
Financial attitude	0.473		
Financial planning	0.528	0.516	

Criteria: Discriminant validity is established at HTMT0.85 (Diamantopoulos & Siguaw, 2006)

4.4. Structural model

We resampled the data with 5000 bootstrap samples to test the hypotheses (Hair et al., 2017). The Beta values for each path coefficient in Table 4 indicate that digital financial literacy affects financial planning positively. According to Table 4, the proposed relationship (H1) substantially impacts Financial Planning. In particular, the study supported Hypothesis 1 (Digital Financial Literacy -> Financial Planning, = 0.365, p 0.0001, LLCI = 0.224, ULCI = 0.496). At the same time, financial attitude also proves to have a positive influence on financial planning as indicated in Hypothesis 2 (Financial Attitude -> Financial Planning, = 0.364, p 0.0001, LLCI = 0.208, ULCI = 0.489) Fig. 2 is a graphical representation of the structural model evaluation illustration.

Table 4. Path coefficient

Direct effect	Beta	S.E.	t-value	p-value	LLCI	ULCI	Decision
H1: Digital financial literacy -> Financial planning	0.365	4.427	0.000	0.000	0.224	0.496	Supported
H2: Financial attitude -> Financial planning	0.364	4.275	0.000	0.000	0.208	0.489	Supported

Note: *p<0.05, **p<0.01, Bias Corrected, LL=Lower Limit, UL=Upper Limit
p-value of 0.01, 0.05 (Hair et al., 2017)

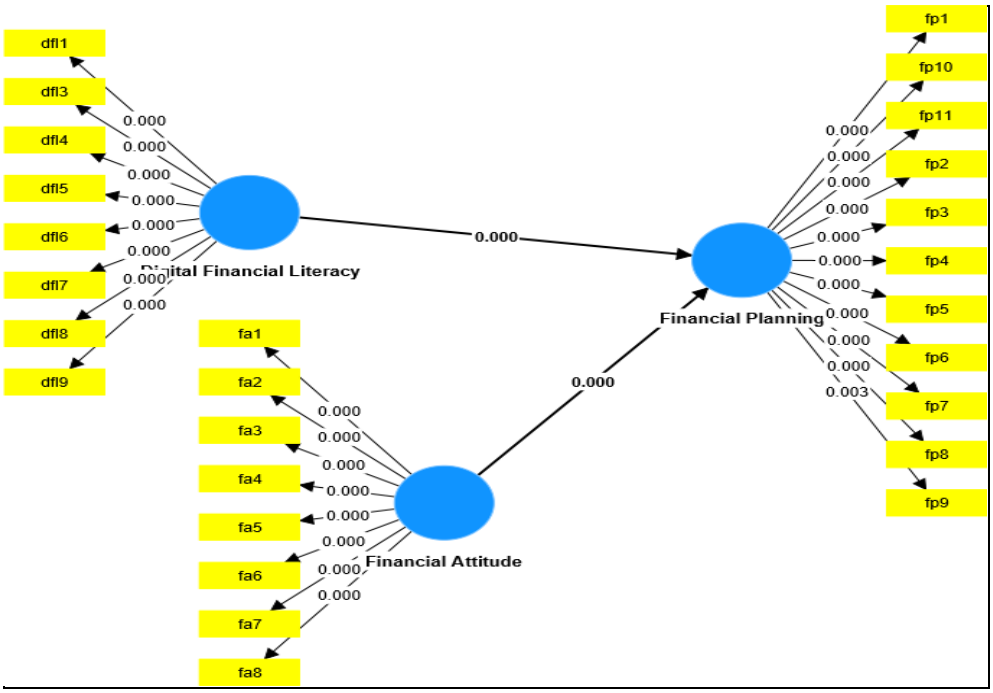

Figure 3. Structural model

According to Hair et al. (2017), the evaluation of the structural model for collinearity is not a concern if all the inner VIF values of the independent variables (Digital Financial Literacy and Financial Attitude) are less than 5 or 3.3. (Hair et al., 2017). Subsequently, we assessed the structural model relationship significance and relevance by examining the path coefficient after bootstrapping and evaluating the level of R-Square (coefficient) to predict the model's accuracy and using it as the sum of the exogenous variables' influence on the endogenous variable(s).

R^2 is the sum of variance in the endogenous system, characterised by all connected exogenous constructs. Impact ratings vary from 0 to 1, with higher values indicating more prediction accuracy. Thus, this study employs R^2, as indicated by Cohen (1988), which corresponds to considerable (0.26), moderate (0.13), and low (0.02) levels of predictive precision, respectively. Table 5 displays the model quality evaluation. This study determines the coefficient of determination (R2) and effect size (f2) of exogenous variables on the endogenous variable. All constructs (Digital Financial Literacy and Financial Attitude) have a moderate effect size of f^2 on Financial Planning (Cohen, 1988).

In particular, the R^2 value for Digital Financial Literacy and Financial Attitude is 0.388, indicating that Financial Attitude could substantially explain Financial Planning. The multi-collinearity of indicators was also evaluated. Both indicators satisfy the VIF values, which are consistently lower than the anticipated collinearity concerns of 5.0 (Hair et al., 2014) and 3.3 (Hair et al., 2014).

Table 5. Model quality assessment

Direct effect	f^2	R^2	VIF
H1: Digital financial literacy -> Financial planning	0.172	0.388	1.267
H2: Financial attitude -> Financial planning	0.171		1.267

$f^2 \geq 0.35$ consider Substantial (Cohen, 1988), $R^2 \geq 0.26$ consider Substantial (Cohen, 1989)

VIF ≤ 3.3 (Diamantopoulos & Siguaw, 2006) or ≤ 5.0 (Hair et al., 2017)

4.5. PLS-predict

The prediction relevance of the endogenous construct was examined using the PLSpredict approach (see Shmueli et al., 2019). (Financial Planning). Table 6 shows that all values for business intelligence indicators had lower RMSE and MAE than the linear model (LM), indicating that Financial Planning had a high prediction power (Shmueli et al., 2019).

Table 6. PLS-predict

Construct	Items	PLS-RMSE	MAE	LM-RMSE	MAE	PLS-LM RMSE	MAE	Q^2_predict	Predict power
Financial planning	fp1	0.651	0.541	0.827	0.666	-0.176	-0.125	0.274	High
	fp10	0.747	0.624	0.881	0.663	-0.134	-0.039	0.005	
	fp11	0.711	0.621	0.732	0.614	-0.021	0.007	0.047	
	fp2	0.653	0.532	0.868	0.655	-0.215	-0.123	0.276	
	fp3	0.735	0.586	0.883	0.708	-0.148	-0.122	0.219	
	fp4	0.717	0.590	0.835	0.664	-0.118	-0.074	0.359	
	fp5	0.714	0.595	0.907	0.719	-0.193	-0.124	0.260	
	fp6	0.935	0.745	1.343	0.925	-0.408	-0.180	0.342	
	fp7	0.730	0.611	0.829	0.662	-0.099	-0.051	0.208	
	fp8	0.793	0.659	0.882	0.705	-0.089	-0.046	0.170	
	fp9	0.771	0.621	1.082	0.794	-0.311	-0.173	-0.034	

4.6. Moderation effect

Table 7 shows the result of the moderating effect of Digital Financial Planning (DFL) in the relationship between Financial Attitude (FA) and Financial Planning (FP); the result was β = -0.097, *t*-value = 0.955, *p*-value = 0.170, LLCI = −0.255 and ULCI = 0.073, which is deemed not supported. The details are summarised in Table 7.

Table 7. Moderation assessment

Moderation effect	Beta	S.E.	t-value	p-value	LLCI	ULCI
H3: DFL x FA -> FP	-0.097	0.102	0.955	0.170	-0.255	0.073

DFL: Digital Financial Literacy, FA: Financial Attitude, FP: Financial Planning

Note: *p<0.05, **p<0.01, Bias Corrected, LL=Lower Limit, UL=Upper Limit

p-value of 0.01, 0.05 (Hair et al., 2017)

5. Discussion

The discussion of findings is presented according to the objective set beforehand: 1) to identify the determinants of financial planning and 2) to examine the relationship of determinants of financial planning. In the first objective, there are two hypotheses: H1 and H2. This paper, H1, is supported by digital financial literacy, increases digital risk awareness and enhances financial plans. Individuals can integrate advanced products and services to fit their long-term goals. The findings also align with Gan et al. (2021), where the authors demonstrate a significant relationship between robo-advisory and financial planning. Technology usage

helps evaluate an individual's financial circumstance in every financial process. Ultimately, individuals can generate a tailored financial plan fit to their desires and needs at the expense of time spent on technology (Tharp et al., 2021).

The following hypothesis is H2. H2 is supported; thus, financial attitude positively influences financial planning. The result demonstrates that youth have better financial attitudes than Garg and Singh's (2018) study has suggested. The findings are aligned with a prior study by Vasudeva (2021). The nature of individual attitude correlates with retirement saving behaviours. If the individual is careless, they are more likely not to start saving and not following their budgeting plan. Therefore, proper attitude should be the first step in preparing a financial plan.

The moderation role of digital financial literacy between financial attitude and financial planning is not supported and not supported. The findings imply that understanding products and services does not affect an individual's outlook on financial planning. This contradicts Morgan and Trinh (2019), where emerging tools and software, such as robo-advisory and automated wealth management, should motivate consumers to learn digital risk and digital management. Rather than digital financial literacy, it might be wise to assess financial goals' moderator role as they are touted as antecedents in financial planning (Sin et al., 2019).

6. Conclusion

In summary, there are a few key highlights of the study: digital financial literacy and financial attitude as the antecedent of financial planning, and digital financial literacy is not a moderator in the context of Malaysian youth. The result suggests significant implications for stakeholders: policymakers, researchers and youth. For the policymakers, it is proven a need to implement the concept of digital financial literacy in the current national financial education framework. This also applies to vulnerable populations not directly in the education system, such as older people and working adults.

For the academician, the result can be used as a reference to support the influence of digital financial literacy in financial decisions and bridging the knowledge to financial planning and financial attitude. It is also interesting to understand the role of digital financial literacy with different determinants of financial planning (e.g. financial literacy, financial behaviour financial resilience and fintech adoptions) in a different context.

In the meantime, the result serves as a wake-up call for the youth to prepare for future financial commitments. Retirement, savings and emergency funds should be the main priority as youth enter the working period. Preparations, including individual skills and knowledge, should be considered, which can be improved by engaging in financial programs. At the same time, youth also need to learn about current financial innovations that offer better perspectives in generating quality alternatives to the financial plan.

The paper is not free from limitations. First, Malaysia's population comprises different races, religions and cultural backgrounds. The study never denied possible intervention from socio-demographic factors towards a financial plan. Second, the study measures income level even though literature reviews have highlighted it as a critical factor in making a financial plan. Future researchers may take this opportunity to address the limitation. At the same time, financial literacy should be included in the framework so that researchers can differentiate it from the influence of digital financial literacy.

References

Adam, A.M., Frimpong, S., and Opoku Boadu, M. (2017). Financial literacy and financial planning: implication for financial well-being of retirees. *Business and Economic Horizons*, 13(2), 224–236.

Agarwal, S., Amromin, G., Ben-David, I., Chomsisengphet, S., and Evanoff, D. D. (2015). Financial literacy and financial planning: evidence from India. *Journal of Housing Economics*, 27, 4–21.

Akhter, T., and Hoque, M. E. (2022). Moderating effects of financial cognitive abilities and considerations on the attitude–intentions nexus of stock market participation. *International Journal of Financial Studies*, 10(1), 5.

Boisclair, D., Lusardi, A., and Michaud, P.-C. (2017). Financial literacy and retirement planning in Canada. *Journal of Pension Economics and Finance*, 16(3), 277–296.

Bongini, P., and Cucinelli, D. (2019). University students and retirement planning: never too early. *International Journal of Bank Marketing*, 37(3), 775–797.

Cohen, J. (1988). Statistical power analysis for the behavioural sciences, 2nd edn.(Hillsdale, NJ: L. Erlbaum Associates).

Diamantopoulos, A., and Siguaw, J. A. (2006). Formative versus reflective indicators in organisational measure development: a comparison and empirical illustration. *British Journal of Management*, 17(4), 263-282.

Fox, J. and Bartholomae, S. (2020). Household finances, financial planning, and COVID-19. *Financial Planning Review*, 3(4), 1–9.

Gan, L. Y., Khan, M. T. I., and Liew, T. W. (2021). Understanding consumer's adoption of financial robo-advisors at the outbreak of the COVID-19 crisis in Malaysia. *Financial Planning Review*, 4(3), 1–18.

Garg, N., & Singh, S. (2018). Financial literacy among youth. *International Journal of Social Economics*, 45(1), 173–186.

Goda, G. S., Manchester, C. F., and Sojourner, A. J. (2014). What will my account really be worth? Experimental evidence on how retirement income projections affect saving. *Journal of Public Economics*, 119, 80–92

Hair, J. F., Hult, G. T. M., Ringle, C. M., Sarstedt, M., and Thiele, K. O. (2017). Mirror, mirror on the wall: a comparative evaluation of composite-based structural equation modeling methods. *Journal of the Academy of Marketing Science*, 45(5), 616-632.

Hair, J. F., Risher, J. J., Sarstedt, M., and Ringle, C. M. (2019). When to use and how to report the results of PLS-SEM. *European Business Review*, 31(1), 2-24.

Hair Jr, J. F., Sarstedt, M., Hopkins, L., and Kuppelwieser, V. G. (2014). Partial least squares structural equation modeling (PLS-SEM). *European Business Review*, 26(2), 106.

Henseler, J., Ringle, C., and Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. *Journal of the Academy of Marketing Science*, 43(1).

Kock, N., and Lynn, G. (2012). Lateral collinearity and misleading results in variance-based SEM: an illustration and recommendations. *Journal of the Association for information Systems*, 13(7).

Kock, N. (2015). Common method bias in PLS-SEM: A full collinearity assessment approach. *International Journal of e-Collaboration*, 11(4), 1-10.

Liew, T., Lim, P., and Liu, Y. (2020). Digital financial literacy: a case study of farmers from rural areas in Sarawak. *International Journal of Education and Pedagogy*, 2(4), 245–251.

Lusardi, A., and Oggero, N. (2017). Millennials and financial literacy: a global perspective. *Global Financial Literacy Excellence Center*, 5, 17.

Merdeka Center. (2021). *National Youth Survey Findings 2021*.

Morgan, P. J., and Trinh, L. (2019). *The need to promote digital financial literacy for the digital age*.

Nadeem, M. A., Qamar, M. A. J., Nazir, M. S., Ahmad, I., Timoshin, A., and Shehzad, K. (2020). How investors attitudes shape stock market participation in the presence of financial self-efficacy. *Frontiers in Psychology*, 11(October), 1–17.

Normawati, R., Rahayu, S., and Worokinasih, S. (2021). Financial knowledge, digital financial knowledge, financial attitude, financial behaviour and financial satisfaction on millennials. *Proceedings of the 1st International Conference on Law, Social Science, Economics, and Education, ICLSSEE 2021, March 6th 2021, Jakarta, Indonesia*, 5(7), 126–138.

OECD. (2022). Financial planning and financial education for old age in times of change. In *OECD Finance and Business Policy Papers*.

Rahim, N. M., Ali, N., and Adnan, M. F. (2022). Students' financial literacy: digital financial literacy perspective. *GATR Journal of Finance and Banking Review*, *6*(4), 18–25.

Ramayah, T., Cheah, J., Chuah, F., Ting, H., and Memon, M. A. (2018). Partial least squares structural equation modeling (PLS-SEM) using smartPLS 3.0.

Research for Social Advancement. (2020). *The impact of COVID-19 on the youth in Malaysia* (Issue 12). https://refsa.org/wp-content/uploads/2021/01/Youth-Survey- Report-REFSA-Brief-Issue-12.pdf

Ringle, C. M., Sarstedt, M., Mitchell, R., and Gudergan, S. P. (2020). Partial least squares structural equation modeling in HRM research. *The International Journal of Human Resource Management*, 31(12), 1617-1643.

Securities Commission Malaysia. (2022). *Youth capital market survey: a Malaysian perspective*.

Shmueli, G., Sarstedt, M., Hair, J. F., Cheah, J. H., Ting, H., Vaithilingam, S., & Ringle, C. M. (2019). Predictive model assessment in PLS-SEM: guidelines for using PLSpredict. *European journal of marketing*.

Sin, R., Murphy, R. O., and Lamas, S. (2019). Goals-based financial planning: how simple lists can overcome cognitive blind spots. *Journal of Financial Planning*, 32(7), 34–43.

Tan, S. and Singaravelloo, K. (2020). Financial literacy and retirement planning among government officers in Malaysia. *International Journal of Public Administration*, 43(6), 486–498.

Tharp, D. T., Lurtz, M., Mielitz, K., Kitces, M., and Ammerman, D. A. (2021). Exploring relationships between technology use and time spent in the financial planning process. *Journal of Financial Counseling and Planning*, JFCP-19-00047.

Vasudeva, S. (2021). Predictors of retirement saving behavior. *The IUP Journal of Applied Finance*, 27(4), 54–73.

Verkijika, S. F. (2019). If you know what to do, will you take action to avoid mobile phishing attacks: self-efficacy, anticipated regret, and gender. *Computers in Human Behavior*, 101(8), 286–296.