

INCOMAR 2023
The 9th International Conference on Marketing and Retailing**SELF-EFFICACY, RELIGIOSITY, FINANCIAL BEHAVIOR, AND
FINANCIAL WELL-BEING**

Mei Teh Goi (a)*, Mohd Rizal Palil (b), Nor Hazila Mohd Zain (c), Nor Hasikin Mamat (d)

*Corresponding author

(a) Faculty of Business & Management, Open University Malaysia, goimeiteh73@oum.edu.my

(b) School of Accounting, Universiti Kebangsaan Malaysia, mr_palil@ukm.edu.my

(c) Faculty of Business, Information & Human Sciences, Infrastructure University Kuala Lumpur,
norhazila@iukl.edu.my

(d) Faculty of Business, Information & Human Sciences, Infrastructure University Kuala Lumpur,
norhasikin@iukl.edu.my

Abstract

Past literature has intensively investigated numerical factors in determining financial behavior and financial well-being. This study aimed to examine the impact of non-numerical cognitive factors toward financial behavior and financial well-being. The two non-numerical cognitive factors are self-efficacy and religiosity. Based on Bandura's social cognitive theory, self-efficacy was adopted. Given the importance of religion in the decision making process of Muslims, it has been incorporated into this study. A total of 219 data from the Muslim community were used to test the research model. This study employed Structural Equation Modeling (SEM) to examine the interconnections among self-efficacy, religiosity, financial behaviour, and financial well-being. This study found that self-efficacy and religiosity were significantly related with financial behavior and financial well-being. However, there was no significant correlation between financial behaviour and financial well-being. This study suggests that self-efficacy and religiosity should be considered in supporting individuals' financial decision making. Confidence in managing money and strong spiritual life can enhance Muslims in addressing financial matters.

2357-1330 © 2024 Published by European Publisher.

Keywords: Financial behavior, financial well-being, religiosity, self-efficacy

1. Introduction

The director of the Malaysian Department of Insolvency (MDI) reported that a total of 294,000 Malaysians is embroiled in bankruptcy cases in a year Bernama (2018) and average of 18 people were declared bankrupt every day (The Star, 2022). In order to solve the problem, Debt Management and Counseling Agency (AKPK) under the Malaysia Central Bank has expanded its role to assist potential bankrupts (“AKPK expands role,” 2018). A lot of effort has been devoted by academicians and practitioners in exploring financial well-being. Early financial studies focused intensively on investigating the impact of financial literacy on personal financial decisions (Bay et al., 2014). However, a report by the Organization for Economic Development and Cooperation (OECD) indicated that most countries have shown little improvement in financial literacy despite a heavy investment in it (Farrell et al., 2016). Farrell et al. (2016) called for further investigation of other factors that influence financial behavior.

Strömbäck et al. (2017) and Tang and Baker (2016) further claimed that too many researchers have focused on numerical cognition such as financial literacy and financial knowledge on personal financial decision, but little has been done on non-numerical cognition factors. Thus, in understanding individuals’ financial decisions from a different perspective, Strömbäck et al. (2017) and Tang and Baker (2016) had introduced psychological traits in their studies. This study further extended Strömbäck et al. (2017) and Tang and Baker (2016) recommendation by introducing non-numerical cognitive factors in the financial behavior literature. In the past, studies in finance that focused on non-numerical cognitive factors had received little attention (Muradoglu & Harvey, 2012). At present, non-numerical cognitive factors have been recognized and accepted as potential factors in the financial field (Farrell et al., 2016; Muradoglu & Harvey, 2012).

In recent years, two pertinent non-numerical cognitive factors have been examined in the personal financial decision literature. The first non-numerical cognitive factor is Bandura’s efficacy model (1977) which was highly suggested by past literature, for example by Sexton and Tuckman (1991), and Farrell et al. (2016). A lot of previous researchers had adopted Bandura’s (1977) self-efficacy theory in the area of health, education, and organizational behavior to understand individuals’ ability in performing a particular task (Danes & Haberman, 2007). Second, Klein et al. (2017) explained that religion is an important factor in shaping financial behavior, however, it has not been widely investigated within financial studies. Benjamin et al. (2016) indicated that religious identities affect individuals’ economic outcomes. For example, Muslims have been found to have less preference in financial risk-taking as compared to Christians (León & Pfeifer, 2017). Klein et al. (2017) suggested that religiosity should be taken into consideration in the study of financial behavior. Although a number of non-numerical cognitive factors have been examined against financial well-being (e.g., Strömbäck et al., 2017), the impact of self-efficacy and religiosity toward financial practices has received scant investigation.

Despite the gaps discussed above, a study (Van Praag et al., 2010) found that Muslims are less satisfied with the personal financial situation compared to Christians and Jews. Although the study investigated financial satisfaction within Israel, the finding prompted this study to further investigate this issue among Muslims in Malaysia. Van Praag et al. (2010) justified that the finding may have to do with the status of Muslims as a minority in Israel. Hence, it will be interesting to investigate Muslims in Malaysia because they are the majority in Malaysia. Furthermore, Shukry (2014) found that more than

50% of Muslims in Malaysia have no financial assets. Since material wealth might only be one aspect of well-being, this study further investigates financial well-being from a more comprehensive aspect. Therefore, this study combined the two non-numerical cognitive factors by examining both self-efficacy and religiosity toward financial behavior and financial well-being within the Muslim in Malaysia.

2. Literature Review

Bandura (1977) conceptualized a theory which explains and predicts behaviors that lead to specific outcomes. Predicting a behavior is shaped by stimuli that could be from the internal or external environment, thus Bandura (1977) had introduced self-efficacy. Bandura's self-efficacy theory has been extensively adopted by researchers in diverse disciplines. Within the financial field, self-efficacy has been used in predicting financial behavior (Farrell et al., 2016; Lim et al., 2014; Mindra et al., 2017). Additionally, past literature has introduced numerous new antecedents in predicting a behavior such as self-control (Strömbäck et al., 2017), financial literacy (Adam et al., 2017; Gutter & Copur, 2011), financial planning (Adam et al., 2017), and credit counseling (Kim et al., 2003). Self-efficacy has been adopted over the years in financial studies as an independent variable alongside with other antecedents in predicting financial behavior (Farrell et al., 2016), but religiosity has not been examined along with self-efficacy. Therefore, this study further reviewed the relationship between religiosity, self-efficacy, financial behavior, and financial well-being.

2.1. Religiosity

According to Augenblick et al. (2016), religiosity is difficult to measure. Keister (2008) defined religiosity as spiritual life that guides individuals' attitude and behavior in relation to money and possessions. Augenblick et al. (2016, p. 38) defined "religion faith as a demand for beliefs." Chen et al. (2016) indicated that World Values Surveys defined religiosity as the involvement of individuals in a religious service as well as their level of religious beliefs. For the purpose of this study, Keister's (2008) three dimensions were used. Keister (2008) operationalized religiosity into three dimensions which are divine guidance (seeking help), accumulation (necessary of having extra), and sacrificial giving (give money back to God).

2.2. Self-Efficacy

Bandura introduced self-efficacy as an individual's perception or judgment that he/she is competent in performing a desired behavior (Bandura, 1977; Sexton & Tuckman, 1991). Self-efficacy, a component of social cognition, refers to an individual's willingness or beliefs and is not related to the individual's actual knowhow (Williams, 2010) or ability to perform a particular task (Amatucci & Crawley, 2011). Farrell et al. (2016) who adopted self-efficacy in financial literature, indicated that financial self-efficacy is an individual's confidence in performing his/ her favorable personal financial outcomes.

2.3. Financial Wellbeing

Financial well-being was defined as being financially healthy, happy, and free from worry (Gutter & Copur, 2011). Garðarsdóttir and Dittmar (2012) indicated that financial well-being includes objective (compulsive buying and a tendency to spend) and subjective (financial worry) indicators. Brügger et al. (2017) defined financial wellbeing as “the perception of being able to sustain current and anticipated desired living standards and financial freedom” (p. 229). Prawitz et al. (2006) indicated that there has been little agreement as to the best way to measure financial well-being. In order to measure financial well-being, past literature has introduced measures based on both psychological perspectives (Prawitz et al., 2006) and financial ratios (Greninger, 1996). Since this study focused on non-numerical aspects, Prawitz et al.’s (2006) financial well-being scale was used. Prawitz et al. (2006) introduced an eight-item scale which requires an individual to self-report subjectively on their current financial situation. The scale includes individual’s present financial situations as well as reactions toward their present state of financial well-being (Prawitz et al., 2006).

2.4. Financial Behavior

Most past literature had measured financial behavior in different approaches (Dew & Xiao, 2011). Fünfgeld and Wang (2009) refer to financial behavior as an individual's specific act or disposition toward finance. Fünfgeld and Wang (2009) introduced five dimensions of financial behavior namely, anxiety, interest in financial issues, intuitive decisions, the need for precautionary saving, and free-spending. According to Fünfgeld and Wang (2009), they also included attitudes in their measurement because attitudes and behavior are interrelated. Gutter and Copur (2011) operationalized financial behavior into four elements namely budgeting, saving, risky credit card behavior, and compulsive buying. Fünfgeld and Wang (2009), and Gutter and Copur (2011) had measured both using attitudes and behavior. Dew and Xiao (2011) introduced a unidimensional concept of financial behavior that includes cash management, credit, saving and investment, and insurance.

2.5. Religiosity and Financial Behavior

Keister (2008) found that religious belief can influence wealth ownership via behaviors. The impact of religion on financial behavior had been intensively investigated in past studies (Kirchmaier et al., 2018), however, most of the studies focused on religion upbringing (e.g. Jamaludin, 2013; Steen, 2004). Chen et al. (2016) found that religiosity can directly influence financial decisions because religions provide a direct guidance on human behavior. Klein et al. (2017) supported the view that religiosity has an impact on financial behavior.

H1: Religiosity is associated with financial behavior

2.6. Self-Efficacy and Financial Behavior

Bandura (1977) introduced self-efficacy to predict a behavioral choice or performance on a specific behavioral task. Bandura (1982) further explained that the cognitive processing of efficacy also influences individual thought patterns, actions, and emotional arousal. Farrell et al. (2016) found that self-

efficacy is a strong predictor of financial behavior. The study indicated that individuals with higher levels of financial self-efficacy have better financial behavior. Lown et al. (2015) also indicated that self-efficacy is associated with financial behavior.

H2: Self-efficacy is associated with financial behavior.

2.7. Religiosity and Financial Well-Being

Keister (2008) explained that religion is connected with wealth, and wealth is among the important elements of well-being. According to Kosher and Ben-Arieh (2017), a lot of studies have given a huge attention to examining the relationship between religiosity and well-being, however, little has been done in investigating the relationship between religiosity and financial well-being. Most studies focused on the comparisons between types of religions on financial decisions (e.g. Kirchmaier et al., 2018; León & Pfeifer, 2017). Van Praag et al. (2010) examined the impact of happiness on financial satisfaction among Israeli citizens of Jewish and Arab descent. The study found that religiosity was significantly related to happiness.

H3: Religiosity is associated with financial wellbeing.

2.8. Self-Efficacy and Financial Well-Being

Bandura (1977, 1982) suggested that an individual with high self-efficacy is predicted to have a better physical and mental well-being. The relationship between self-efficacy and financial wellbeing has rarely been investigated within past studies. Lown (2011) called for more research to further understand the impact of self-efficacy toward financial well-being. Lim et al. (2014) and Mindra et al. (2017) found a significant relationship between self-efficacy and financial help-seeking. The study had provided strong evidence on the relationship of self-efficacy and favorable outcome.

H4: Self-efficacy is associated with financial well-being.

2.9. Financial Behavior and Financial Well-Being

According to Kim et al. (2003), financial well-being is an outcome of financial behavior. Gutter and Copur (2011) indicated that budgeting, saving, risky credit card behavior, and compulsive buying are significantly related to financial well-being among college students. Shim et al. (2010) found that financial behavior is connected with financial well-being for younger adults. Kim et al. (2003) found that financial behavior is significantly related to financial well-being. However, Adam et al. (2017), who examined the relationship of financial behavior toward financial well-being among the retirees found that financial behavior is not significantly related to financial well-being.

H5: Financial behavior is associated with financial well-being.

3. Research Methods

Malaysian Muslims were invited to participate in the research and data were collected using self-administered questionnaires. Hair et al. (2014) suggested a minimum sample size of 150 for models with less than seven variables. In total, 219 data were used to perform structural equation model (SEM). Table

1 shows the data distribution based on age, gender, education, marital status, type of employment, and income.

Table 1. Demographic Details of Respondents

	Variables	N	Percentage (%)
Age	20 to 25	20	9.1
	25 to 30	47	21.5
	30 to 35	51	23.3
	35 to 40	49	22.4
	40 to 45	23	10.5
	45 to 50	12	5.5
	50 to 55	7	3.2
	55 to 60	10	4.6
Gender	Male	68	31.1
	Female	151	68.9
Education	Secondary School	39	17.8
	Diploma	58	26.5
	Bachelor Degree	65	29.7
	Master Degree	47	21.5
Marital	PhD	10	4.6
	Single	48	21.9
	Married	165	75.3
	Windowed	3	1.4
Employment	Separated/Divorced	3	1.4
	Regular full time	197	90.0
	Regular part time	2	0.9
	Temporary full time	7	3.2
	Temporary part time	9	4.1
	Causal employee	4	1.8
Income	Below RM2000	49	22.4
	RM2000 to 3999	90	41.1
	RM4000 to 5999	44	20.1
	RM6000 to 7999	20	9.1
	Above RM8000	16	7.3

The questionnaire items were adapted from past literature (Table 2). The questionnaire was divided into four sections and a 5-point Likert scale was used. To check for the reliability and validity of the questionnaire, Confirmatory Factor Analysis (CFA) was performed. Composite Reliability (CR) and Average Variance Extracted were calculated. Some items were eliminated from the original measurement to achieve the minimum acceptable level. Although few AVE values are below the minimum acceptable level of 0.50, Fornell and Larcker (1981) stated that AVE above 0.40 can be accepted when the CR is higher than 0.60. Therefore, convergent validity was supported.

Table 2. Variables Descriptive Statistics, Validity and Reliability

Citation	Variable	Dimensions	Items	Factor loading	Mean	SD	CR	AVE
Keister (2008)	Religiosity	Divine (R1)	1	0.51	4.03	0.61	0.87	0.49
			2	0.57				
			3	0.71				
			4	0.75				
			5	0.77				
			6	0.74				
			7	0.81				
		Accumulation (R2)	1	0.44	2.36	0.83	0.67	0.45
			2	0.98				
			3	0.43				
		Sacrificial giving (R3)	1	-	3.29	0.53	0.82	0.53
			2	0.68				
			3	0.82				
			4	0.68				
			5	0.72				
6	-							
Lown (2011)	Self-Efficacy (SE)	-	1	0.66	2.81	0.74	0.83	0.45
			2	0.70				
			3	0.49				
			4	0.80				
			5	0.73				
			6	0.60				
Fünfgeld and Wang (2009)	Financial behavior	Anxiety (FB1)	1	0.80	3.20	0.90	0.88	0.64
			2	0.80				
			3	0.80				
			4	0.83				
		Interest (FB2)	1	0.74	3.10	0.84	0.74	0.59
			2	0.79				
		Intuitive (FB3)	1	0.64	3.62	0.66	0.60	0.42
			2	-				
			3	0.66				
			4	-				
			5	-				
		Need for precautionary Saving (FB4)	1	0.73	4.42	0.62	0.82	0.70
			2	0.92				
		Free-spending (FB5)	1	-	3.00	0.91	0.67	0.52
			2	0.59				
3	0.83							
Prawitz et al. (2006)	Financial Wellbeing (FW)	-	1	0.81	2.52	0.83	0.91	0.59
			2	0.80				
			3	0.85				
			4	0.79				
			5	0.75				
			6	0.70				
			7	0.50				
			8	0.89				

4. Results and Discussion

Table 3 shows the results of the correlation coefficient among the variables and the square root of AVE for the variables. The results indicate a non-violation of multicollinearity with all correlation coefficients (r) below 0.90. The results also indicate discriminant validity, with the square roots of AVE above the value of correlation coefficient.

Table 3. Variables Correlations and Square Roots of AVE

	R1	R2	R3	SE	FB1	FB2	FB3	FB4	FB5	FW
R1	0.70									
R2	-0.19**	0.67								
R3	0.49**	0.07	0.73							
SE	-0.02	-0.10	-0.01	0.67						
FB1	0.17*	0.10	0.14*	-0.32**	0.80					
FB2	0.00	0.17*	-0.01	0.15*	0.02	0.77				
FB3	0.19**	-0.05	0.04	0.22**	-0.01	0.45**	0.65			
FB4	0.26**	-0.16*	0.11	0.07	0.14*	0.09	0.20**	0.84		
FB5	0.03	0.12	0.01	-0.22**	0.38**	0.06	-0.01	0.03	0.72	
FW	0.09	-0.10	0.17*	0.63	-0.23**	-0.03	0.08	0.03	-0.18**	0.77

Notes: *p<0.05; **p<0.01; the italicized and bolded is square roots of AVE; R1=Divine; R2=Accumulation; R3=Sacrificial giving; SE=self-efficacy; FB1=Anxiety; FB2=Interest; FB3=Intuitive; FB4=Need for precautionary saving; FB5: Free-spending; FW= Financial Wellbeing.

Structural equation modeling (SEM) was performed to examine the research model. In order to show consistency of the estimate, bootstrap sample was generated. This study's 2000 resample generated 95% confidence intervals. The model was found to be a good fit for the data ($\chi^2=370.44$, $df=196$, $\rho=0.001$, $\chi^2/df=1.89$, $RMR=0.06$, $TLI=0.90$, $CGI=0.92$, $RMSEA=0.06$). There was a significant direct effect of religiosity ($p=0.05$) and self-efficacy ($p=0.007$) on financial behavior. Religiosity and self-efficacy explained 20% ($R^2=0.20$) of variance in financial behavior. The results concur with Kirchmaier et al. (2018) and Keister (2008). Similarly, religiosity ($p=0.002$) and self-efficacy ($p=0.001$) directly predict financial well-being. Both religiosity and self-efficacy explain 56% ($R^2=0.56$) of variance in financial well-being. These findings, along with Van Praag et al. (2010), support the significant relationship between X and Y. Hence, H1, H2, H3, and H4 are supported. Unexpectedly, there was no direct effect of financial behavior on financial well-being ($p>0.05$). Thus, H5 is not supported. Although contrary to the findings of a few studies (Kim et al., 2003; Shim et al., 2010), these findings support Adam et al. (2017) who also found no relationship between financial behavior and financial well-being. The results are presented in Table 4 and Figure 1.

Table 4. Paths Test in the Structural Model

Hypothesis	Path	Standardized Estimate	S.E	C.R	p-value
H1	Religiosity → Financial Behavior	0.22	0.10	1.95	0.05*
H2	Self-efficacy (SE) → Financial Behavior	-0.38	0.08	-2.69	0.007**
H3	Religiosity → Financial Well-being	0.24	0.12	3.05	0.002**

H4	Self-efficacy (SE) → Financial Well-being	0.67	0.11	6.64	0.001**
H5	Financial Behavior → Financial Well-being	-0.10	0.15	-1.26	0.21

Notes: *p<0.05; **p<0.01

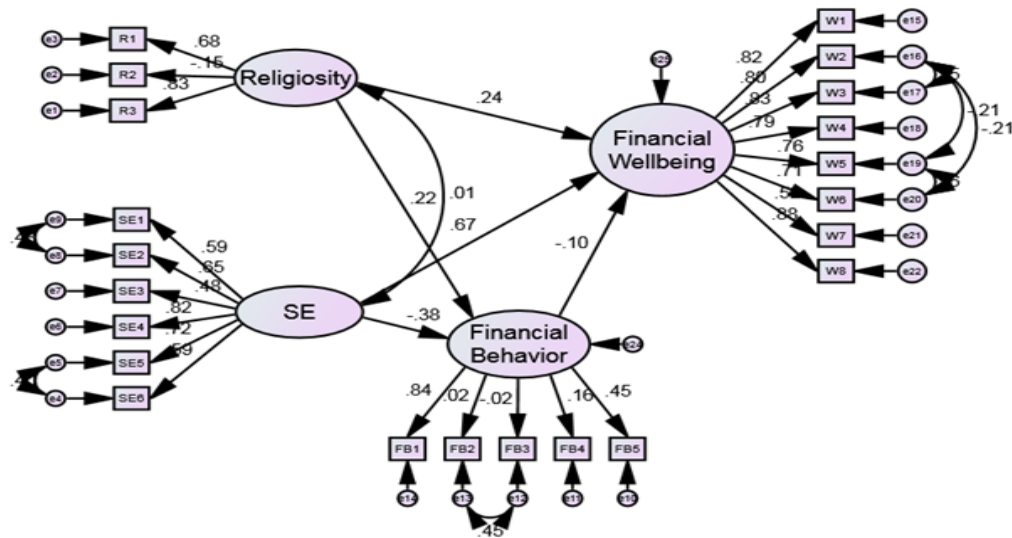


Figure 1. Research Framework

5. Conclusion

Past studies have shown that financial literacy can affect financial behavior and financial well-being. This study advances the literature related to financial behavior in examining the impact of non-numerical cognitive factors on financial behavior and financial well-being. In contrast to other studies, this study did not focus on numerical cognitive. Based on suggestions by past literature, two non-numerical cognitive factors were introduced to further understand the relationship between financial behavior and financial well-being. Though numerical cognitive is essential, the influence of non-numerical cognitive is not to be undermined. Moreover, past literature had focused on how financial behavior differs according to the types of religion. However, this study has advanced the knowledge by adopting Keister (2008) measurement of religiosity in measuring individuals' spiritual life toward financial management. The results of SEM revealed that both religiosity and self-efficacy had a direct effect on financial behavior and financial well-being. However, it was found that financial behavior and financial well-being are not related within the Muslim community. Past literature had extensively depended on financial literacy in predicting financial behavior and financial well-being. These findings highlight the importance of religiosity and self-efficacy in predicting financial behavior and financial well-being. This study suggests that financial self-efficacy and religiosity are also essential factors that should not be ignored.

Since not everyone is predisposed to the numerical factors and that not everyone is interested in financial matters, additional factors can be considered by government agencies in order to enhance

individuals' financial behavior and financial well-being. Religion has received a lot of focus in personal well-being, however, it is hardly adopted in personal financial well-being. This study suggests that individuals' spiritual life and attitude toward money from the religious perspective are able to support them in managing their financial matters. Central banks in Malaysia should work in tandem with religious agencies in educating the Muslim on money or financial matters from the perspective of Islam. Therefore, more studies should be undertaken to further understand the specific religious teachings or principles required in understanding financial management from the Islamic perspective. Further, this study suggests that financial behavior and financial well-being can be improved with financial self-efficacy. Individuals' confidence in managing financial matters can be gained with the help of an expert or counselor. Vancampfort et al. (2018) suggested five approaches to gain self-efficacy which are (1) motivational interviewing, (b) exploring past, present and future, (3) assisting in goal setting, (4) providing recommendations, and (5) providing information on benefits and how to overcome barriers. Further studies are needed to examine these factors that are associated with financial self-efficacy.

There are a few limitations of this study. Firstly, the data were self-reported. An individual has the tendency to report better financial behavior and financial well-being. Therefore, the data might be subject to social desirability bias and may not be representative of the population. Secondly, this study focused only on the Muslim community, using a non-probability sampling technique. Thus, the sample may not represent the population. In order to enhance the generalizability of the findings, similar studies can be replicated among the Muslim community using a probability sampling technique.

References

- Adam, A. M., Frimpong, S., & Opoku Boadu, M. (2017). Financial literacy and financial planning: Implication for financial well-being of retirees. *Business and Economic Horizons*, 13(2), 224-236. <https://doi.org/10.15208/beh.2017.17>
- AKPK expands role to help potential bankrupts. (2018, February 1). *The Star*. <https://www.thestar.com.my/business/business-news/2018/02/01/akpk-expands-role-to-help-potential-bankrupts/>
- Amatucci, F. M., & Crawley, D. C. (2011). Financial self-efficacy among women entrepreneurs. *International Journal of Gender and Entrepreneurship*, 3(1), 23-37. <https://doi.org/10.1108/17566261111114962>
- Augenblick, N., Cunha, J. M., Dal Bó, E., & Rao, J. M. (2016). The economics of faith: using an apocalyptic prophecy to elicit religious beliefs in the field. *Journal of Public Economics*, 141, 38-49. <https://doi.org/10.1016/j.jpubeco.2016.07.004>
- Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review*, 84(2), 191-215. <https://doi.org/10.1037/0033-295x.84.2.191>
- Bandura, A. (1982). Self-efficacy mechanism in human agency. *American Psychologist*, 37(2), 122-147. <https://doi.org/10.1037/0003-066x.37.2.122>
- Bay, C., Catasús, B., & Johed, G. (2014). Situating financial literacy. *Critical Perspectives on Accounting*, 25(1), 36-45. <https://doi.org/10.1016/j.cpa.2012.11.011>
- Benjamin, D. J., Choi, J. J., & Fisher, G. (2016). The review of economics and statistics. *The Review of Economics and Statistics*, 98(4), 617-637.
- Bernama. (2018). Proper planning necessary before applying for financial loan. *Bernama*. <http://bernama.com/bernama/v8/bu/newsbusiness.php?id=1437166>
- Brüggen, E. C., Hogreve, J., Holmlund, M., Kabadayi, S., & Löfgren, M. (2017). Financial well-being: A conceptualization and research agenda. *Journal of Business Research*, 79, 228-237. <https://doi.org/10.1016/j.jbusres.2017.03.013>

- Chen, H., Huang, H. H., Lobo, G. J., & Wang, C. (2016). Religiosity and the cost of debt. *Journal of Banking & Finance*, 70, 70-85. <https://doi.org/10.1016/j.jbankfin.2016.06.005>
- Danes, S. M., & Haberman, H. R. (2007). Teen financial knowledge, self-efficacy, and behavior: a gendered view. *Financial Counseling and Planning*, 18(2), 48-60.
- Dew, J., & Xiao, J. J. (2011). The financial management behavior scale: development and validation. *Journal of Financial Counseling and Planning*, 22(1), 43-59.
- Farrell, L., Fry, T. R. L., & Risse, L. (2016). The significance of financial self-efficacy in explaining women's personal finance behaviour. *Journal of Economic Psychology*, 54, 85-99. <https://doi.org/10.1016/j.joep.2015.07.001>
- Fornell, C., & Larcker, D. F. (1981). Evaluating Structural Equation Models with Unobservable Variables and Measurement Error. *Journal of Marketing Research*, 18(1), 39-50. <https://doi.org/10.1177/002224378101800104>
- Fünfgeld, B., & Wang, M. (2009). Attitudes and behaviour in everyday finance: evidence from Switzerland. *International Journal of Bank Marketing*, 27(2), 108-128. <https://doi.org/10.1108/02652320910935607>
- Garðarsdóttir, R. B., & Dittmar, H. (2012). The relationship of materialism to debt and financial well-being: The case of Iceland's perceived prosperity. *Journal of Economic Psychology*, 33(3), 471-481. <https://doi.org/10.1016/j.joep.2011.12.008>
- Greninger, S. (1996). Ratios and benchmarks for measuring the financial well-being of families and individuals. *Financial Services Review*, 5(1), 57-70. [https://doi.org/10.1016/s1057-0810\(96\)90027-x](https://doi.org/10.1016/s1057-0810(96)90027-x)
- Gutter, M., & Copur, Z. (2011). Financial Behaviors and Financial Well-Being of College Students: Evidence from a National Survey. *Journal of Family and Economic Issues*, 32(4), 699-714. <https://doi.org/10.1007/s10834-011-9255-2>
- Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2014). *Multivariate Data Analysis* (7th Ed.). Pearson.
- Jamaludin, N. (2013). Religion and individual investment choice decision: the case of Malaysia. *International Journal of Business and Social Sciences*, 4(1), 104-113.
- Keister, L. A. (2008). Conservative Protestants and Wealth: How Religion Perpetuates Asset Poverty. *American Journal of Sociology*, 113(5), 1237-1271. <https://doi.org/10.1086/525506>
- Kim, J., Garman, E. T., & Sorhaindo, B. (2003). Relationships among credit counseling clients' financial well-being, financial behaviors, financial stressor events, and health. *Journal of Financial Counseling and Planning*, 14(2), 75-87.
- Kirchmaier, I., Prüfer, J., & Trautmann, S. T. (2018). Religion, moral attitudes and economic behavior. *Journal of Economic Behavior & Organization*, 148, 282-300. <https://doi.org/10.1016/j.jebo.2018.02.022>
- Klein, P.-O., Turk, R., & Weill, L. (2017). Religiosity vs. well-being effects on investor behavior. *Journal of Economic Behavior & Organization*, 138, 50-62. <https://doi.org/10.1016/j.jebo.2017.04.009>
- Kosher, H., & Ben-Arieh, A. (2017). Religion and subjective well-being among children: A comparison of six religion groups. *Children and Youth Services Review*, 80, 63-77. <https://doi.org/10.1016/j.chilyouth.2017.06.049>
- León, A. K., & Pfeifer, C. (2017). Religious activity, risk-taking preferences and financial behaviour: Empirical evidence from German survey data. *Journal of Behavioral and Experimental Economics*, 69, 99-107. <https://doi.org/10.1016/j.socec.2017.05.005>
- Lim, H., Heckman, S., Montalto, C. P., & Letkiewicz, J. (2014). Financial stress, self-efficacy, and financial help-seeking behavior of college students. *Journal of Financial Counseling and Planning*, 25(2), 148-160.
- Lown, J. M. (2011). Development and validation of a financial self-efficacy scale. *Journal of Financial Counseling and Planning*, 22(2), 54-63.
- Lown, J. M., Kim, J., Gutter, M. S., & Hunt, A.-T. (2015). Self-efficacy and Savings among Middle and Low Income Households. *Journal of Family and Economic Issues*, 36(4), 491-502. <https://doi.org/10.1007/s10834-014-9419-y>

- Mindra, R., Moya, M., Zuze, L. T., & Kodongo, O. (2017). Financial self-efficacy: a determinant of financial inclusion. *International Journal of Bank Marketing*, 35(3), 338-353. <https://doi.org/10.1108/ijbm-05-2016-0065>
- Muradoglu, G., & Harvey, N. (2012). Behavioural finance: the role of psychological factors in financial decisions. *Review of Behavioural Finance*, 4(2), 68-80. <https://doi.org/10.1108/19405971211284862>
- Prawitz, A. D., Garman, E. T., Sorhaindo, B., O'Neill, B., Kim, J., & Drentea, P. (2006). InCharge Financial Distress/Financial Well-Being Scale: Development, Administration, and Score Interpretation. *Association for Financial Counselling and Planning Education*, 17(1), 34-50
- Sexton, T. L., & Tuckman, B. W. (1991). Self-beliefs and behavior: The role of self-efficacy and outcome expectation over time. *Personality and Individual Differences*, 12(7), 725-736. [https://doi.org/10.1016/0191-8869\(91\)90228-4](https://doi.org/10.1016/0191-8869(91)90228-4)
- Shim, S., Barber, B. L., Card, N. A., Xiao, J. J., & Serido, J. (2010). Financial Socialization of First-year College Students: The Roles of Parents, Work, and Education. *Journal of Youth and Adolescence*, 39(12), 1457-1470. <https://doi.org/10.1007/s10964-009-9432-x>
- Shukry, A. (2014, November 27). With zero savings, most M'sians may face dire straits. *The Edge Financial Daily*. <http://www.theedgemarkets.com/article/zero-savings-most-m%E2%80%99sians-may-face-dire-straits>
- Steen, T. P. (2004). The relationship between religion and earnings: recent evidence from the NLS Youth Cohort. *International Journal of Social Economics*, 31(5/6), 572-581. <https://doi.org/10.1108/03068290410529399>
- Strömbäck, C., Lind, T., Skagerlund, K., Västfjäll, D., & Tinghög, G. (2017). Does self-control predict financial behavior and financial well-being? *Journal of Behavioral and Experimental Finance*, 14, 30-38. <https://doi.org/10.1016/j.jbef.2017.04.002>
- Tang, N., & Baker, A. (2016). Self-esteem, financial knowledge and financial behavior. *Journal of Economic Psychology*, 54, 164-176. <https://doi.org/10.1016/j.joep.2016.04.005>
- The Star. (2022, 23 Jun). 18 people declared bankrupt on daily basis. <https://www.thestar.com.my/news/nation/2022/06/23/18-people-declared-bankrupt-on-a-daily-basis>
- Van Praag, B. M., Romanov, D., & Ferrer-i-Carbonell, A. (2010). Happiness and financial satisfaction in Israel: Effects of religiosity, ethnicity, and war. *Journal of Economic Psychology*, 31(6), 1008-1020. <https://doi.org/10.1016/j.joep.2010.08.008>
- Vancampfort, D., Gorczynski, P., De Hert, M., Probst, M., Naisiga, A., Basangwa, D., & Mugisha, J. (2018). Exercise self-efficacy correlates in people with psychosis. *Psychiatry Research*, 262, 359-362. <https://doi.org/10.1016/j.psychres.2017.08.095>
- Williams, D. M. (2010). Outcome Expectancy and Self-Efficacy: Theoretical Implications of an Unresolved Contradiction. *Personality and Social Psychology Review*, 14(4), 417-425. <https://doi.org/10.1177/1088868310368802>