



Measurement Constructs for Personal Financial Capability in Islamic Finance. Evidence on Zanzibar

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Abstract

This study conceptualises the constructs and indicators to assess the individual's financial capability in Islamic finance. This study applied an exploratory approach by reviewing the literature about financial capability and literacy. Besides, this study used convenient sampling to obtain questionnaire respondents across the Zanzibar region. This study performed exploratory and confirmatory factor analysis to determine the validity and reliability of the conceptualised measurement constructs and indicators. The factor analysis confirmed three constructs of personal financial capabilities in Islamic finance: attitudes towards Islamic finance, Islamic financial literacy, and Shari'ah compliance financial behaviour. Besides, this study proposed eleven indicators to measure the three proposed constructs of individual's financial capability in Islamic finance. The original contribution of this study is to conceptualize and validate the measurement constructs and indicators for personal financial capability from an Islamic finance perspective. This study extends to the Islamic financial capability model by incorporating attitudes towards Islamic finance, Islamic financial literacy and Shari'ah-compliant financial behaviour. The proposed measurement constructs are useful for researchers and service providers in Islamic finance and banking to evaluate the ability of a person to make viable financial decisions based on Islamic principles.

Keywords: Financial capability, Islamic finance, Shari'ah compliant financial behaviour, Zanzibar

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1. Introduction

While most studies on individuals' financial behaviours in Islamic finance focus on Islamic financial literacy, this study proposes the measurement constructs for persons' financial capability in Islamic finance. Generally, personal financial success and well-being depend significantly on the ability to make viable financial decisions given certain socioeconomic circumstances ([The World Bank, 2022](#)). Based on the financial capability approach, a meaningful relationship exists between personal financial capability, socioeconomic circumstances, and an individual's financial behaviour and well-being ([Bagwell et al., 2014](#)). Subsequently, this study proposes Islamic financial capability as a measure of the wider aspect of an individual's ability to deal with the general financial environment through Islamic finance to achieve financial targets and well-being. This study urges the financial capability framework to comprehend an individual's financial ability compared to the knowledge-based measurements proposed under the concept of Islamic financial literacy ([Shephard et al., 2017](#)). Previous studies have also suggested that financial literacy alone is insufficient to indicate an individual's ability to make informed financial decisions. In addition to financial literacy, an individual needs internal freedom to behave in his best interest ([Bagwell et al., 2014](#); [Perotti et al., 2013](#)). Indeed, a financially capable person should be confident and willing to act on available opportunities ([Istikomah et al., 2022](#)).

Islamic finance studies use Islamic financial literacy synonymously with personal financial capability ([Abdullah and Anderson, 2015](#); [Setyowati et al., 2018](#)). Most of these studies focus on knowledge and

understanding of Islamic financial concepts and products but fail to incorporate the components of attitudes and financial behaviour in assessing Islamic financial literacy (Aisyah and Saepuloh, 2019; Albaity and Rahman, 2019; Bünyamin and Mutlu, 2017; Nawi et al., 2018; Rahman et al., 2018). Abdullah and Anderson (2015), Setyowati et al. (2018), and Bünyamin and Mutlu (2017) incorporated literacy knowledge, attitudes, and behaviour to develop a financial literacy index. However, these studies were based on conceptualized indicators and did not validate the measurement constructs. Most studies lack consistency in their measurement indicators of Islamic financial literacy (Firdausi and Kasri, 2022). This problem has also affected the comparability of the results of studies of people's financial capabilities in Islamic finance. Thus, this study suggests that Islamic financial literacy is an important component of Islamic financial capabilities. However, Islamic financial literacy alone is insufficient for reflecting a person's financial capabilities.

This study contributes to the literature by conceptualizing and validating the constructs and measurement indicators of financial capability from an Islamic finance perspective. This study provides new insights for researchers and financial service providers of Islamic finance. This study sheds light on researchers and financial institutions that assess people's willingness and ability to use Islamic financial services. Because of the novelty of this area, this study is based on the general financial capability frameworks of previous scholars to propose the components of personal Islamic financial capability (Bagwell et al., 2014; Kempson et al., 2005; Kempson et al., 2013; Shephard et al., 2017). The measurement constructs proposed by Bünyamin and Mutlu (2017) to measure the Islamic financial literacy index also form the basis for measuring Islamic financial capabilities. Subsequently, this study is classified into literature review, methodology, results and conclusion sections.

2. Literature Review

This section discusses the basic financial capability models and the limitations of Islamic financial literacy measurements. In addition, this section introduces the constructs for measuring personal financial capabilities in Islamic finance.

2.1 The basic financial capability measurement frameworks

Financial capability studies refer to Amartya Sen's financial capability approach, which emphasizes human freedom to act upon opportunities to achieve well-being. According to Sen's (2007) capability approach, it is of moral importance for humans to achieve welfare (Sen, 2007). Accordingly, Sen (2007) defined financial capabilities as a blend of abilities that enables a person to decide to act. The combination of capabilities and the people's perspective "beings" and "doings" (functioning) should result in the person's "reason to value". In general, basic capabilities include the intrinsic and socioeconomic attributes that should be considered. Focusing exclusively on material resources has been criticised by the capability approach. Nevertheless, Sen's capability approach does not specify the forms of capabilities to be considered or provide an approach to aggregate capabilities in the overall assessment. Various financial capability models have been proposed, based on Sen's capability approach (Kuhumab, 2018).

From a financial perspective, the financial capability framework proposed by (Kempson et al., 2005) provides the basis for many financial capability measurement frameworks. Kempson et al. (2005) asserted that a financially capable person possesses the combination of knowledge, skills, attitudes, and confidence required to make financial management decisions, given certain personality and environmental circumstances. Environmental circumstances include experience and the socioeconomic environment, such as social influences, religion, culture, and economic status (Godinho and Russel, 2013; Kempson et al., 2005). Subsequently, Sherraden (2010) proposed a financial capability framework that combines financial literacy and accessibility of financial services. According to Sheradden (2010), financial literacy and inclusion are important components of financial capability. Financial literacy is obtained from financial knowledge, whereas financial inclusion refers to affordable, attractive, easy-to-use, safe, and reliable financial services. Besides, economic socialization (cognitive, behavioural, and environmental influences) has a crucial contribution to an individual's financial capability (Sheradden, 2010).

Taylor (2011) suggested that the assessment of financial capability should cover a wider scope of financial knowledge, skills, and behaviour, which are required to enable a person to make successful economic decisions. Bagwell et al. (2014) categorized personal financial capabilities into abilities, mindset, and connections. Ability refers to financial literacy, which represents financial knowledge and skills. The mindset represents financial

attitude and motivation. The connection represents the ease and accessibility of financial services (Bagwell et al., 2014). Conversely, Shephard et al. (2017) define financial capability as a combination of behaviour influenced by an individual's level of financial literacy, attitude, and many psychological factors. Psychological factors include optimism, locus of control, non-impulsivity, goal orientation, and susceptibility to peer effects. In a narrow definition, Shephard et al. (2017) referred to financial capability as positive financial behaviour. The definition provided by Shephard et al. (2017) corresponds with that of Atkinson et al. (2006). Nevertheless, Bagwell et al. (2014) and Kempson et al. (2005) differentiated financial behaviour from financial capabilities and suggested that these components should be measured accordingly. According to Atkinson et al. (2006), financial behaviour includes performing four important informed financial decisions: tackling problem debt, managing money well, building resilience, and preparing for life ahead. Thus, financial capabilities are essential to informed financial decisions. Indeed, individuals' financial well-being depends on their ability to act upon their financial behaviour (Bagwell et al., 2014; The World Bank, 2022).

Based on the reviewed financial capability models, the main components of financial capability are categorized as internal capabilities, which include mind-set (attitude and motivation) and ability (skills and knowledge), and external capabilities, which are referred to as connections (easy and accessible financial services). In most cases, personal financial capabilities represent internal personal capabilities, which depend on the environmental circumstances (The World Bank, 2022). The environmental circumstances affecting financial capabilities include social, cultural, economic and political factors that require a careful assessment (Kempson et al., 2013). In Islamic finance, the assessment of a person's financial capability should reflect the knowledge, attitudes and confidence about Islamic finance. Unfortunately, the current literature lacks comprehensive measurement constructs and indicators for assessing the Islamic financial capability of a person. This current study conceptualises the measurement constructs for intrinsic personal financial capabilities in Islamic finance. The study conceptualized Islamic financial capability measurement constructs based on prior research (Atkinson et al., 2006, Bagwell et al., 2014; Godinho and Russel, 2013; Kempson et al., 2005; Shephard et al., 2017; Sherraden, 2010). The subsequent section discusses the Islamic financial literacy (IFL) concepts as used interchangeably with financial capability by some prior studies (Aisyah and Saepuloh, 2019; Albaity and Rahman, 2019).

2.2 Measurement indicators for Islamic Financial Literacy (IFL)

Prior studies have made significant contributions by defining and conceptualizing the measurement indicators for IFL. However, the literature provides variations in the meaning and measurement indicators of the IFL (Table 1).

Table 1: The Definitions of IFL

Definition	Author and year
Ability to use financial knowledge, skills, and attitude in managing financial resources according to Islamic principles.	Abdullah and Cheng (2014)
Islamic financial knowledge acquired through education and experience; specifically related to Islamic financial concepts and products.	Abdullah and Anderson (2015)
Individuals' knowledge of Islamic finance.	Hidajat and Hamdani (2016)
Individual's ability to use Islamic financial knowledge, skills and attitude in managing finance.	Rahim et al. (2016)
Individual degree of financial knowledge, attitude and behaviour.	Setyawati and Suroso (2016)
Individual's Islamic financial knowledge, attitudes, and behaviour.	Setyowati et al. (2018)
Individual's degree of knowledge, awareness, and skill in basic Islamic financial information and products	Antara et al. (2017)
Ability to understand finance according to Shari'ah (Islamic law) compliance	Aisyah and Saepuloh (2019)
Knowledge of the basic concepts and products of Islamic finance.	Nawi et al. (2018)

Based on the references (Table 1), IFL has a narrow and broader meaning. In a narrow definition, IFL is defined as a person's degree of awareness, knowledge, and skills regarding basic Islamic financial concepts, products, and operations. Broadly, IFL is defined as a person's ability to use financial knowledge, attitude, and behaviour in managing personal finance by Islamic principles. In addition, the existing definitions clearly show that

Islamic financial “knowledge, “awareness” and skills” are common to most definitions of IFL. Some studies extended the definition by incorporating attitude and behaviour; however, the problem is that the measurement instrument proposed by these studies is not available and some are not validated (Albaity and Rahman, 2019; Bunyamin and Mutlu, 2017). Most of the available instruments measure an individual's knowledge and familiarity with the concepts and products of Islamic finance (Table 2). Against these limitations, this study conceptualises comprehensive measurement constructs and indicators to assess personal financial capability from an Islamic finance perspective.

Table 2: Common indicators used to measure IFL

IFL measurement items	Sources
Awareness and Knowledge about:	
<ol style="list-style-type: none"> 1. Basic Islamic finance concepts: prohibition of Riba (usury) 2. Basic Islamic finance products/contracts: basic features of Salam contracts; Murabaha contracts; Mudarabah contracts; Ijarah contracts; Istisna'a contracts; and Musharakah contracts. 	Hidajat and Hamdani (2016)
<ol style="list-style-type: none"> 1. I know that I might or might not receive any return when the contract is concluded 2. I acknowledge uncertainty on the sanctity of financial contract is strictly prohibited in Islam 3. I always make sure that there is no element of interest in all financial transactions that I made 4. I understand that all Islamic financing must be backed by asset 5. I can only invest in permissible activities or services 6. I am aware of the availability of Islamic instruments in the market 7. In Islam, I only transact with people that I trust 	
<ol style="list-style-type: none"> 1. Information on financial knowledge: division, purchasing power, profit and loss sharing, calculation of profit and loss sharing, compound of profit and loss sharing, risk and return, definition of inflation, diversification 2. Information on financial behaviour: spending behaviour, paying bills on time, looking at financial affairs, setting long-term goals and striving to achieve, being responsible and having a household budget, active saving or purchasing investments. 3. Information on financial attitude: attitudes towards spending and saving money 4. Personal Financial management practice: cash management, financing management, risk management, retirement and estate planning, general management- creating financial goals, making plans on reaching financial goals, setting specific financial goals for the future 	Setyawati and Suroso (2016)
<ol style="list-style-type: none"> 1. Knowledge of Islamic financial products: leasing, Sukuk (Islamic bond), participation account, insurance, credit cards, and Individual retirement funds. 2. Individuals' financial attitudes: project financing, risk diversion, positive return, risk-return, risk basket, inflation-price, exclusively for Muslims 3. Individuals' financial behaviour: paying bills, financial tracking, it is to spend money, daily living, spending-saving motive, analysis before buying, participation in banks are different, the risk of savings, long-term goals, emulation of religious rules 	Bunyamin and Mutlu (2017)
<ol style="list-style-type: none"> 1. Basic Concepts: prohibition of Riba, prohibition of Gharar, prohibition of Maysir 2. Borrowing Concepts: Mudarabah (profit sharing contract), Musharakah (profits/loss sharing contract), Ijarah (lease contract), Murabahah (trade contract), Istisna' (product under construction), Qard al Hassan (interest-free loan), Rahn (Mortgage), Ujrah (commission) 3. Saving/ Investment Concepts: Wadia'a (saving), Waqf (endowment) 	Antara et al. (2017); Ahmad et al. (2020)

4. Protection Concepts: Takaful (Islamic insurance)	
1. Concept of money: the concept of money in Islam and lawful means to earn a return	
2. Islamic banking: The general principles of Islamic banking	
3. Takaful: the nature of takaful contract i.e. the principle of Tabarru' (donation), Gharar (uncertainty) in insurance contracts, insurer-insured relationship in Takaful	Nawi et al. (2018)
4. Shari'ah compliance investments: prohibition of Gharar, Maysir (gambling), Shari'ah-compliant investment contract	
1. Basic Questions of Islamic Financial Literacy: Numerical, Basic of Riba, Gharar and Maysir, Muamalah Contract	
2. Advance Questions of Islamic Financial Literacy: Islamic Banking, Islamic Capital Market, Non-Islamic Banking Industry	Setyowati et al. (2018)
3. Questions of Personal Financial Planning: Financial Management Planning, Islamic Investment Choice	

3. Methodology

This study was based on an exploratory design. This design was deemed suitable because of the limited existing research in this area (Nawi et al., 2018). References to personal financial capabilities in Islamic finance are limited. Thus, this study conceptualizes the components of personal Islamic financial capability by reviewing the literature on the general concepts and models of financial capability, financial literacy, and Islamic financial literacy. Reviewing this area provides a broader exploration of the research area and, hence, the basis for proposing measurement constructs and indicators for financial capability from an Islamic finance perspective (Antara et al., 2017). Subsequently, a cross-sectional survey was conducted to collect responses from 389 Zanzibar residents. This survey enabled researchers to validate the conceptualized constructs and indicators of Islamic financial capability. The study used convenient sampling procedures to select respondents from 11 districts across the 5 Zanzibar regions. For respondents to be involved in the survey, they must be Zanzibar residents, above 18 years of age, and able to read and write. Using the IBM SPSS-AMOS software, we conducted exploratory factor analysis (EFA) and confirmatory factor analysis (CFA) to determine the reliability and validity of the measurement constructs and items (Field, 2015).

3.1 The study area

This study was conducted in Tanzania-Zanzibar. Zanzibar is a semi-autonomous state of the United Republic of Tanzania with a total population of 1.899 million (OCGS-Zanzibar, 2022). Most residents in Zanzibar are Muslims. Thus, Islamic finance has been the most desired mode of financing (FinScope, 2017). In recent years, there has been a significant increase in financial institutions offering Islamic financial services in Zanzibar, particularly Islamic banking services. Five banks offered Islamic financial services in Zanzibar. Islamic social financial institutions such as Waqf and trustees (Amanah) are well established. Besides, efforts are underway to establish Islamic insurance and other forms of financing (Khamis et al., 2022). Given the increasing desire for Islamic finance and the newness of Islamic finance in Tanzania, assessing the financial capability of people is an important step towards improving the quality of services.

4. Results and Analysis

4.1 Proposed constructs for personal financial capability in Islamic finance

A broader investigation of an individual's capability beyond Islamic financial literacy may provide a better understanding of individuals' financial behaviour, including the choice and usage of Islamic financial products. This study conceptualizes a measurement model for Islamic financial capability based on the financial capability models designed by Bagwell et al. (2014), Kempson et al. (2005), Kempson et al. (2013) and Shephard et al. (2017). Therefore, in addition to the components proposed by the general financial capability frameworks, this study considers the unique characteristics of Islamic finance.

Henceforth, Islamic financial capability is conceptualised using three (3) components: Islamic financial literacy, attitude towards Islamic financial institutions and products, and Shari'ah-compliant financial behaviour (Table 3). A person who possesses a combination of Islamic financial literacy, a positive attitude

towards Islamic finance, and financial behaviour embedded with Shari'ah compliance will use Islamic financial services to manage their finances (Bunyamin and Mutlu, 2017; Rahim et al., 2016; Setyowati, et al., 2018; Setyawati and Suroso, 2016).

Table 3: Measurement constructs for personal Islamic Financial Capability (IFC)

Constructs	Measurement indicators	Source
1. Attitude on Islamic financial services (ATTIFS)	Perceived usefulness of Islamic finance; Perceived Compatibility of Islamic finance; Perceived Ease of use of Islamic financial services	Buchari, Rafiki and Qassab (2015); Albaity and Rahman (2019)
2. Islamic financial literacy (IFKN)	Knowledge and awareness about Islamic financial concepts and products	Hidajat and Hamdani (2016); Antara et al. (2017)
3. Shari'ah Financial Behaviour (SCFD)	Tracking finances; planning; Staying informed; Preserving Islamic principles in financial transactions	Bunyamin and Mutlu (2017); Firdausi and Kasri (2022); Shakirah and Ahmad, (2020)

4.1.1 Islamic Financial Literacy (IFKN)

Commonly, Islamic financial literacy measures the awareness and knowledge about Islamic financial concepts and products (Aisyah and Saepuloh, 2019; Antara et al., 2017; Nawi et al., 2018; Setyawati and Suroso, 2016). The assessment of Islamic financial literacy may also include knowledge about Islamic financial products, attitudes towards Islamic finance, and financial behaviour according to Islam (Bunyamin and Mutlu, 2017; Setyowati et al., 2018). In this study, Islamic financial literacy represents a person's awareness, knowledge, and skills regarding basic Islamic finance's operational concepts and products (Abdullah and Anderson, 2015; Antara et al., 2017).

4.1.2 Attitudes towards Islamic Financial Services (ATTIFS)

Islamic financial capabilities are determined by attitudes towards Islamic financial services and institutions. This study defines ATTIFS as evaluative judgments and confidence regarding the usefulness, compatibility, and simplicity of Islamic financial services and institutions (Albaity and Rahman, 2019; Buchari et al., 2015).

4.1.3 Shari'ah compliance financial behaviour (SCFD)

A persona attached to Shari'ah compliance is probably able to consider Islamic finance in undertaking financial decisions. Thus, a financially capable person in Islamic finance should have Shari'ah compliance discipline. In this study, the SCFD measures an individual's tendency to abide by Islamic principles in planning and managing financial management activities abiding by Islamic principles (Bunyamin and Mutlu, 2017).

4.2 Validation of the measurement constructs and indicators

This study performed surveys to validate the measurement construct and indicators for personal financial capability from an Islamic finance perspective. This study used a structured questionnaire to collect responses from Zanzibar residents. The results are presented in the following paragraphs: The presentation of the results starts with the respondents' profiles, exploratory factor analyses, and confirmatory factor analysis.

4.2.1 Preliminary test

The preliminary tests involved the review for missing values, outliers and data normality. There were no missing values from the dataset; hence, all 389 received questionnaires fitted for the preliminary analysis. Outliers were determined using Mahalanobis distance (MD). Accordingly, the p-value for each MD was calculated to determine whether there were any outliers. All p-values were above 0.01 (Field, 2015), hence, there was no outlier problem from the data set. Data normality was determined using the kurtosis and skewness

values. The normality test indicated a slight skew of the data, but not a serious skew (Table 4). Therefore, the assumption of normality of the data was met.

Table 4: Normality test

	Skewness		Kurtosis	
	Statistic	Std. Error	Statistic	Std. Error
ATTIFS	-1.027	.213	.878	.423
SCFD	-.680	.213	.172	.423
IFL	-.825	.213	.831	.423
Valid N (listwise)	389			

Source: Author

4.2.2 Respondents' profile

The respondents' profiles (Table 5) show that most respondents were male, young, Muslim, educated and had a low level of income. The results showed that the respondents could answer the questionnaires appropriately and independently. These results reflect the actual socioeconomic situation of the Tanzanians.

Table 5: Respondents' profile

		Frequency	Per cent
Gender	Male	202	51.9
	Female	187	48.1
Age	18 to 29 years	308	79.1
	30 to 39 years	69	17.8
	40 to 49 years	9	2.3
	60 and above	3	0.8
Religion	Muslim	359	92.2
	Non-Muslim	30	7.8
Education level	Not attended any school	4	1.0
	Ordinary secondary education	9	2.3
	Advanced secondary education	18	4.7
	Basic/technical certificate	27	7.0
	Ordinary diploma	45	11.5
	Bachelor Degree	286	73.5
Income level (Exchange rate: TZS/USD = TZS2,341)	Less than TZS 300,000	274	70.5
	TZS300,000 to 499,999	69	17.7
	TZS500,000 to 999,999	18	4.6
	TZS1000,000 to 1,999,999	15	3.9
	TZS2000,000 to 2,999,999	6	1.5
	TZS3000,000 to 4,999,999	3	0.8
TZS5,000,000 and above	4	1.0	

Source: Author

4.2.3 Exploratory Factor Analysis (EFA)

The EFA for this study was based on principal component analysis (PCA), and Varimax rotation was performed to simplify the results and provide the best indicators for each construct in the measurement instrument (Coakes, 2011). Sampling adequacy was examined using the Kaiser-Meyer-Olkin test (KMO), and the correlation between the indicators was examined using Bartlett's test sphericity. These tests determine the suitability of performing the EFA. Based on the results (Table 6), KMO was above the 0.7 threshold, and the

significance value of Bartlett's test sphericity was below 0.05. Therefore, sampling adequacy is substantial, and the data are suitable for performing EFA (Field, 2015).

Table 6: Sampling adequacy and validity

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.844
Bartlett's Test of Sphericity	Approx. Chi-Square	1700.800
	df	210
	Sig.	.000

Source: Author

Subsequently, PCA divided the measurement indicators into three constructs: attitudes towards Islamic financial services (ATTIFS), Islamic financial knowledge (IFKN), and Shari'ah-compliant financial behaviour (SCFD). These three constructs explain approximately 61.9 per cent of the variance in the model (Table 3). The original questionnaire consisted of 11 indicators to measure ATTIFS, 12 indicators to measure IFKN, and 10 indicators to measure SCFD. The minimum extracted loading was set at 0.5 as the cut-off value, and loading below 0.5 was deleted from the matrix (Field, 2015). Based on PCA results (Table 3), seven ATTIFS indicators had loading values above 0.5, eight IFKN indicators had loading values above 0.5, and six SCFD indicators had loading values above 0.5. In contrast, some indicators had loading values below 0.5 and were removed from the measurement constructs. The removed indicators involved Four indicators of ATTIFS (FATT8, FATT9, FATT10, and FATT 11), four indicators of IFK (IFL5, IFL6, IFL7, and IFL12), and four indicators of SCFD (FB4, FB8, FB9, and FB10). Additionally, we performed a reliability test to examine the internal consistency of the measurement indicators in the constructs. This study used Cronbach's alpha (CA) to assess the reliability of measurement indicators. Based on the results, the CA value for all constructs is above 0.8 (Table 7), which indicates substantial internal consistency of the measurement indicators within the constructs (Field, 2015).

Table 7: Indicators' loadings and reliability

Description	ATTIFS	IFKN	SCFD	CA
Attitudes towards Islamic financial services (ATTIFS)				0.904
FATT1 The information on certain Islamic financial products is sufficient and easily understood	.856			
FATT2 In my view, the service charges of Islamic financial services are cheaper than conventional financial services	.849			
FATT3 Islamic financial products/services are attractive to customers.	.873			
FATT4 Islamic financial transactions are more secure compared to conventional financial services.	.660			
FATT5 It is wise to take credit facilities from Islamic financial institutions.	.673			
FATT6 Islamic financial products are uniquely featured	.889			
FATT7 I consider using Islamic financial services more useful than conventional financial services.	.597			
Islamic financial literacy (IFKN)				0.896
IFL1 Preservation of wealth is one of the objectives of Islamic finance.		.572		
IFL2 Uncertainty (Gharar) is strictly prohibited in Islamic financial contracts		.724		
IFL3 I always make sure that there is no element of interest in all financial transactions that I make		.745		

IFL4	I am aware of the Islamic financial instruments in the financial markets			.690
IFL8	Islamic financial institutions may invest with a customer according to the profit-sharing method (Mudarah).			.657
IFL9	Islamic financial institutions may provide interest-free loans (Qard al Hassan)			.757
IFL10	Islamic financial institution provides lease contracts (Ijarah) to customers.			.743
IFL11	Islamic financial institution provides trade financing (Murabahah)			.760
Shari'ah-compliant financial behaviour (SCFD)				0.853
FB1	I prepare my spending plan and I stick to it			.689
FB2	I monitor my financial issues closely			.745
FB3	I keep my spending records			.771
FB5	I borrow money to meet my financial needs			.771
FB6	I use financial services to reduce my exposure to the unexpected			.755
FB7	I pay attention to implementing religious principles in money-related issues.			.616
Eigenvalues		7.594	3.763	1.647
Variance explained		22.325	22.153	22.153
Cumulative variance		22.325	44.479	61.928

Source: Author

4.2.4 Confirmatory Factor Analysis (CFA)

CFA was performed to examine the relationship between the constructs proposed during the EFA. CFA was performed using SPSS-AMOS. During CFA, model fit was tested to examine the suitability of the model for the data. The fit indices were based on the goodness of fit index (GFI), normed fit index (NFI), Bentler's comparative fit index (CFI), standard root mean square residual (SRMR), root mean square error of approximation (RMSEA), and chi-squared (X^2). X^2 and GFI represent the absolute fit of the model, and NFI, CFI, and RMSEA represent alternative fit indices. Accordingly, the model was fit if X^2 was insignificant ($p > 0.05$); GFI, CFI, and NFI were above 0.9; SRMR was below 0.08; RMSEA was between 0.0 and 0.08; and P-close was greater than 0.0 (Collier, 2020; Nam et al., 2018). Based on the results (Table 8), X^2 was insignificant; NFI, TLI, and CFI were above 0.95, SRMR was less than 0.08, RMSEA approached 0.06, and P-close was greater than 0.0. In general, the model fits the data.

Table 8: Model fits test indexes

Fit index	Value	DF	P	CMIN/DF
X^2	64.140	41	.012	1.564
NFI	0.925			
TLI(NNFI)	0.971			
CFI	0.971			
RMSEA	0.066			
P-close	0.188			
SRMR	0.0557			

Source: Author

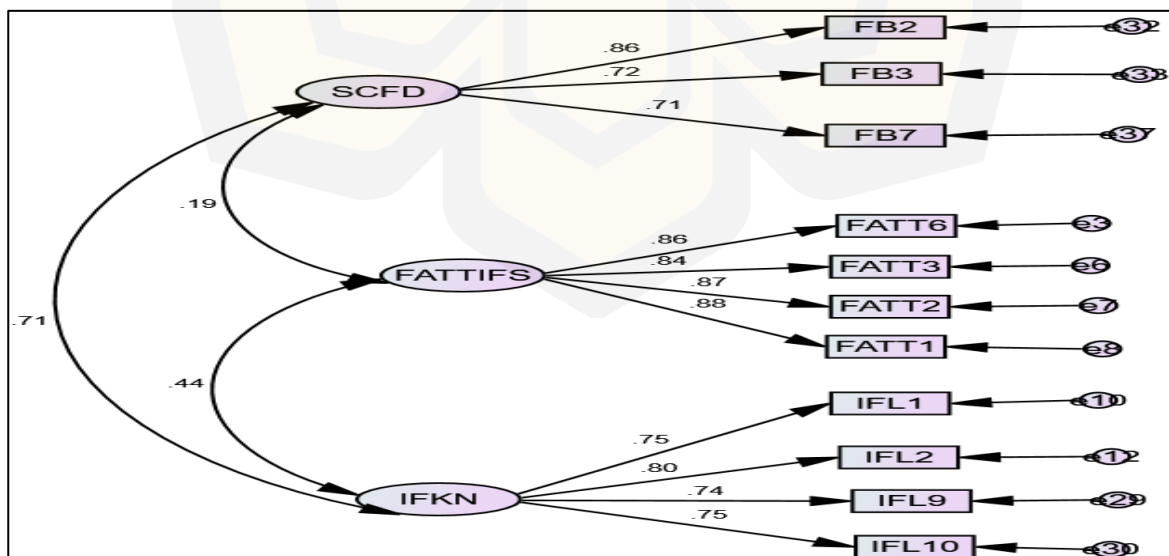
Accordingly, the CFA determined three constructs for measuring Islamic financial capability at the individual level. For the CFA, the required factor loading for each indicator was 0.7 (Hair et al., 2018). The results (Figure 1; Table 9) show that the three indicators of the SCFD had loadings above 0.7, the four indicators of the ATTIFS had loading values above 0.7, and the four indicators of the IFKN had loading values above 0.7. Additionally, the covariance between the indicators was sufficient, indicating the absence of collinearity between constructs. In addition, the regression weights confirmed the significance of the estimates for all the retained indicators.

Table 9: The regression weights for personal Islamic financial capabilities

Path	Unstandardized Estimates	Standard Error	Standardized Estimate	Significance
Attitudes towards Islamic financial services (ATTIFS)				
FATT6<---FATTIFS	.984	.075	.857	***
FATT3<---FATTIFS	.947	.074	.844	***
FATT2<---FATTIFS	.977	.073	.871	***
FATT1<---FATTIFS	1.000		.884	***
Islamic financial literacy (IFKN)				
IFL1<---IFKN	1.000		.753	***
IFL2<---IFKN	.905	.104	.804	***
IFL9<---IFKN	.797	.099	.740	***
IFL10<---IFKN	.795	.098	.748	***
Shari'ah compliant financial behaviour (SCFD)				
FB2<---SCFD	1.640	.205	.858	***
FB3<---SCFD	1.480	.204	.719	***
FB7<---SCFD	1.000		.713	***

Source: Author

Figure 1: The measurement model for personal Islamic financial capability



Source: Author

Based on the CFA results, personal Islamic financial capability was determined using three constructs comprising 11 measurement indicators. Table 10 presents the summary of the measurement indicators for all their constructs.

Table 10: The proposed measurement indicators based on CFA

Attitudes towards Islamic financial services (ATTIFS)	
FATT1	The information on certain Islamic financial products is sufficient and easily understood.
FATT2	In my view, the service charges of Islamic financial services are cheaper than conventional financial services.
FATT3	Islamic financial products/services are attractive to customers.
FATT6	Islamic financial products are uniquely featured
Islamic Financial Literacy (IFKN)	
IFL1	Preservation of wealth is one of the objectives of Islamic finance.
IFL2	Uncertainty (Gharar) is strictly prohibited in Islamic financial contracts.
IFL9	Islamic financial institutions may provide interest-free loans (Qard al Hassan).
IFL10	Islamic financial institution provides lease contracts (Ijarah) to customers.
Shari'ah compliant financial behaviour (SCFD)	
FB2	I monitor my financial issues closely
FB3	I keep my spending records
FB7	I pay attention to implementing religious principles in money-related issues.

Source: Author

5. Discussion of the Results

Existing literature lacks a comprehensive tool for assessing people's financial capabilities from an Islamic finance perspective. Instead, Islamic financial literacy is used synonymously with the financial capability in Islamic finance. However, most of the available measuring instruments are knowledge-based, rather than capable. Additionally, studies on financial capability have differentiated between financial capability and literacy. In financial capability models, financial literacy represents financial knowledge and skills. Thus, financial capability should capture financial attitudes and behaviour in addition to financial literacy. This study contributes to this knowledge by conceptualizing and validating measurement constructs and indicators for assessing personal financial capabilities from an Islamic finance perspective.

This study used two approaches to obtain the results. First, the study reviewed financial capability and financial literacy studies to conceptualize the measurement constructs and indicators of Islamic financial capability. Second, the study conducted a cross-sectional survey and performed exploratory and confirmatory factor analyses to validate the conceptualized constructs and indicators. The study confirmed three constructs to assess personal financial capability in Islamic finance: Islamic financial literacy (IFL), attitudes towards Islamic financial services (ATTIFS), and Shari'ah-compliant financial behaviour (SCFD). In addition, PCA proposed seven (7) indicators to measure ATTIFS, eight (8) indicators to measure IFL, and six (6) indicators to measure SCFD. After performing CFA, the study retained four indicators to measure ATTIFS, four to measure IFL, and three to measure SCFD. These results correspond with those of [Mindra \(2016\)](#), who measured financial attitudes and literacy using four indicators after performing a CFA. The results also corresponded with [\(Bünyamin and Mutlu, 2017\)](#), who used Shari'ah compliance indicators to measure financial behaviour. The results correspond with [\(Mindra, 2016\)](#) who measured financial attitudes and the results correspond with the study by [Setyowati et al. \(2018\)](#) who proposed three components for Islamic financial literacy attitudes, Islamic financial literacy and behaviour. However, [Setyowati et al. \(2018\)](#) did not provide a measurement instrument for their study.

6. Conclusion

The study suggests that from an Islamic finance perspective, a person who acquires basic knowledge and understanding of Islamic finance principles and products may have positive attitudes towards Islamic finance and focus on Shari'ah-compliant behaviour. A financially capable person should understand the economic and spiritual effects of uncertainty (Gharar) and interest (Riba) on financial transactions. In addition, a financially capable person in Islamic finance should plan his finances, taking into consideration the future life in this world and hereafter, knowing that he will be accountable to God. Therefore, individuals with Islamic financial capabilities should consider Islamic financial services an alternative and appropriate mode of financing, investing, saving, and conducting other financial transactions. Moreover, this study proposes that personal Islamic financial capabilities are subject to both positive and negative influences. These influences include personal and environmental circumstances such as the level of education, economic status, social influences, financial experiences, religion, and accessibility of Islamic financial services. The Islamic financial capability model may help researchers determine the interactions between personal capabilities and socioeconomic environments towards Shari'ah-compliant financial inclusion and well-being. Nonetheless, this study is limited to measurement constructs for internal personal Islamic financial capability. Future research in this area should broaden the scope by considering external financial circumstances that contribute to the personal capabilities in the measurement model.

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