The European Journal of Development Research (2020) 32:176–197
https://doi.org/10.1057/s41287-019-00225-3

ORIGINAL ARTICLE

Applicability of *Mudarabah* and *Musharakah* as Islamic Micro-equity Finance to Underprivileged Women in Malaysia

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Published online: 8 July 2019

Abstract

No microfinance institutions (MFIs) in Malaysia offer *mudarabah* and *musharakah* (M&M) as micro-equity instruments. This study looks into the possibility of introducing M&M for underprivileged women entrepreneurs in Selangor State. Hence, it assesses clients' willingness to accept Shariah rules, religiosity, product knowledge and entrepreneurial skills. Data from 330 respondents were collected from female Muslim members of an MFI, namely Amanah Ikhtiar Malaysia (AIM). The data were analysed by using exploratory factor analysis (EFA), confirmatory factor analysis (CFA) and structural equation modelling (SEM). The findings show that women entrepreneurs prefer those Shariah principles that seem easy to comprehend and preserve their interests. They possess primary knowledge of M&M and fairly practise intrinsic and extrinsic religiosity, but lack proper entrepreneurial skills. Therefore, application of M&M would be viable if clients' knowledge of Shariah and M&M were improved along with their religiosity and entrepreneurial skills. These findings would help include M&M within the context of microfinancing.

Keywords *Mudarabah* and *Musharakah* · Profit and loss sharing · Islamic microfinance · Poverty alleviation

Résumé

Aucune institution de microfinance (IMF) en Malaisie n'offre de Mudarabah et de Musharakah (M&M) en tant qu'instruments de micro-capital investissement. Cette étude examine la possibilité d'introduire M&M aux femmes entrepreneurs défavorisées de l'État de Selangor. Par conséquent, il évalue la volonté des clientes d'accepter

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les règles de la charia, leur religiosité, leur connaissance du produit et leurs compétences entrepreneuriales. Les données de 330 participantes ont été recueillies auprès de femmes musulmanes appartenant à une IMF, à savoir Amanah Ikhtiar Malaysia (AIM). Les données ont été analysées en utilisant les méthodes d'analyse factorielle exploratoire (EFA), d'analyse factorielle confirmatoire (CFA) et les modèles d'équation structurelle (SEM). Les résultats montrent que les femmes entrepreneurs préfèrent les principes de la charia qui semblent faciles à comprendre et qui préservent leurs intérêts. Elles possèdent les connaissances de base en matière de M&M et pratiquent équitablement la religion intrinsèque et extrinsèque. Mais elles manquent de compétences entrepreneuriales à proprement parler. Par conséquent, l'application viable du M&M ne serait possible que si les clientes connaissaient mieux la charia et le M&M, et si leur degré de religiosité et leurs compétences entrepreneuriales étaient améliorés. Ces résultats contribueraient à inclure M&M dans le contexte de la microfinance.

Introduction

Mudarabah and *musharakah* (M&M) are the most authentic profit and loss (PLS) sharing financial instruments in the context of Islamic finance (Chong and Liu 2009). *Mudarabah* is a fiduciary partnership that deals with profit-sharing and loss-bearing agreements conducted between business enterprises (Hassan and Saleem 2017). Such contracts take place between two parties: the capital (goods of financial capital) contributor, called *rab-al-mal*, and *mudarib*, which contributes managerial skills to run the business. At the end of the business cycle, both parties are entitled to share the profit or loss generated by the business. In this regard, profit is distributed on the basis of a pre-agreed ratio, whereas loss is borne solely by the capital contributor (*rab-al-mal*). Besides, *rab-al-mal* is not allowed to apply any legal actions unless the loss occurs due to *mudarib*'s misconduct or negligence (Khan 2008; Obaidullah 2015). *Mudarib* is offered full liberty to manage the business with no interference from *rab-al-mal* except monitoring (Rahim 2010). On the other hand, in *musharakah* investment, both parties jointly exercise the business venture by contributing financial (or goods) capital as well as managerial actions upon the condition of rationally sharing the business output. Hence, they share the profit according to a mutual agreement but bear the loss according to the ratio of capital participation (INCEIF 2006). *Musharakah mutanaqisha* (diminishing partnership) is another type of *musharakah* that provides clients with the opportunity to own tangible assets by means of paying lease rental. In this agreement, the financing institution compensates for damage to the asset that may occur during the leasing period (Hasan 2016).

M&M-based partnership agreements seek to use the entrepreneurial skills and good morals of clients while demanding no tangible collateral (ElGindi et al. 2009). Such characteristics seemingly enable these instruments to be incorporated within the context of Islamic microfinance (IsMF). Such microfinance provides collateral-free capital to the poor, mainly for practising microenterprises (Yunus 2007). Indeed, previous studies have found that M&M can viably improve the economic condition of underprivileged Muslim entrepreneurs by allocating business capital

(El-Komi and Croson 2013; Rahim 2010). However, no microfinance institutions (MFIs) in Malaysia offer M&M as micro-equity finance because of the possibilities of adverse borrower selection, moral hazard, agency problems, asymmetric information and credit risk (Khan and Ahmed 2001; Mili and Abid 2017). To date, no empirical studies have been conducted in Malaysia to explore whether M&M-based microfinancing can be introduced for poor women entrepreneurs. This gap creates the scope for this study. However, since Islamic finance is a Shariah-driven system, the aforesaid negative issues should be resolved by using Shariah rules (Gheeraert 2014). In the same vein, this study deduces the importance of client religiosity, product knowledge and entrepreneurship. Hence, a brief explanation of these factors is given below.

Importance of Shariah Rules

Islam prescribes a set of rules for mankind to protect their interests on Earth and salvation thereafter. These rules are known as Shariah (Alam et al. 2015; Dusuki and Bouheraoua 2011). Shariah rules are intertwined with *Maqasid-al-Shariah*, which defines the objectives of protecting religion, life, offspring, intellect and wealth (Othman et al. 2015). *Maqasid-al-Shariah* also provides comprehensive guidelines for Islamic finance and banking. Clients, as well as financial institutions, are obligated to follow the Shariah guidelines in case of dealing with any Islamic financial instrument (Derigs and Marzban 2009). Therefore, prior to extending M&M instruments, microfinance institutions must be certain that clients agree with the underpinning Shariah-based terms and conditions.

Importance of Religiosity, Product Knowledge and Entrepreneurship

Since M&M are Shariah-driven products, clients must accept the underlying Shariah rules for conducting all financial transactions and business activities (Derigs and Marzban 2009). Besides, practising Shariah in every aspect of life is a religious obligation for Muslims. Hence, the acceptance of Shariah law largely depends on Muslims' devoutness to religiosity. Besides, several studies have affirmed that religiosity has a positive influence on clients' intention to engage with Shariah-compliant financial institutions (Ahmad et al. 2008; Amaliah et al. 2015; Amin 2010). Besides, Muslims consider Islam as *ad-din*, a complete guideline for human beings. This religion prescribes a set of rules such that human beings can deal with earthly life and obtain salvation thereafter (El-Gamal 2006). Islam suggests that believers be honest, transparent and dutiful (Abuznaid 2006, 2009). Since M&M financing seeks borrowers' honesty, integrity and transparency (BNM 2007, 2010, 2012), microfinance institutions should consider religious Muslims as the most suitable clients for these partnership agreements. In the same vein, Chen et al. (2016) showed that clients' religiosity has a significant positive influence on reducing the cost of capital. Therefore, financing institutions would encounter lower credit risk when dealing with religious people.

Previous studies have suggested that borrowers' knowledge of financing instruments positively influences their interest in involvement with them (Chen et al. 2017; Johan and Putit 2016). Product knowledge also helps clients better utilise the products, since they know the associated value and risks (Wang and Hazen 2016). Therefore, people who have proper knowledge of M&M would be more interested in dealing with Islamic microfinance institutions as well as these instruments. Thus, clients' product knowledge should be assessed prior to offering them M&M financing.

Mudarabah and *musharakah* (M&M) can only be employed for commercial purposes. Therefore, the involved parties have to possess appropriate business skills. In this regard, *mudaribs*' entrepreneurial qualities can bring about positive outcomes in the business while inspiring *rab-al-mal* to make investments. Similarly, through *musharakah* contracts, seasoned entrepreneurs can expect to earn greater profit and increase the size of their business. Besides, entrepreneurship plays vital roles not only in profit generation but also in risk-taking and risk-mitigating (Burns 2016). Therefore, microfinance institutions also need to look into clients' business skills before investing in M&M-based projects.

Based on the discussion above in "Importance of Shariah Rules" and "Importance of Religiosity, Product-Knowledge and Entrepreneurship" sections, two research objectives (ROs) can be set:

RO1: To investigate the extent to which clients are willing to accept the Shariah regulatory parameters of *mudarabah* and *musharakah* (M&M) financing.
RO2: To investigate the levels of clients' religiosity, knowledge of *mudarabah* and *musharakah* (M&M) instruments and entrepreneurial qualities.

These research objectives (ROs) can be achieved by answering the research questions (RQ) delineated below:

RQ1: To what extent do clients accept the Shariah rules of *mudarabah* and *musharakah* (M&M) financing?
RQ2: What are the levels of clients' religiosity, knowledge of *mudarabah* and *musharakah* (M&M) instruments and entrepreneurial qualities?

Review of Relevant Literature

The following sub-sections further discuss Islamic microfinance, Shariah rules of M&M, religiosity and entrepreneurship.

Islamic Microfinance

Like Islamic finance, Islamic microfinance can be defined as an asset-backed, equity-based, ethical, sustainable, socially responsible and environmentally friendly financing system. This system embodies profit and risk-sharing approaches and places importance on financial inclusion and social welfare. One of the most unique characteristics of Islamic finance is that it has no attachment with interest (*riba*). Rather, it places priority on the materiality of the uses of capital while prohibiting unethical business. Under this financing system, all sorts of business dealings are subject to sharing risks (World Bank 2015). Islamic finance encourages the exercise of *halal* (permissible) business and the practice of Shariah rules, but discourages *gharar* (speculation) and *maysir* (gambling) (Gheeraert 2014; Jaffar and Musa 2014).

Islamic microfinance is rooted in the same philosophical ground of Islamic finance, but differs from commercial Islamic banks in providing collateral-free small-sized business capital to underprivileged people. Islamic microfinance addresses the vulnerable poor, labouring poor, self-employed poor and entrepreneurial poor (Quinones and Remenyi 2014). It offers various types of financing schemes such as (1) microcredit, (2) micro-equity and (3) charity (Obaidullah 2008). Microcredit combines benevolent loans and business loans. *Qardul-hasan* as a benevolent loan chiefly addresses the poor, expecting no surplus return. Business loans (mostly goods) such as *murabaha* and *bai-bithaman ajil* are offered for trading purposes. These loans include a predefined profit margin (Adnan and Ajija 2015). On the other hand, equity instruments, namely *mudarabah* and *musharakah* (M&M), deal with business partnerships. In this case, two or more contracting parties (a microfinance institution and poor entrepreneurs) are responsible for capitalising and managing the business based on an agreement regarding sharing profit and loss. Islamic microfinance offers some advantageous instruments such as *zakat*, *sadakah* and *waqf*. These funds are offered to the vulnerable poor as charity, and in some cases to manage business risks (Obaidullah 2008).

Shariah Rules of M&M

Shariah rules refer to Islamic legal principles. Clients, as well as Islamic financial institutions, are obligated to follow these rules in order to be involved with any commercial agreement and practice. These principles are rooted in the Quran, *Hadith* and *Ijtihad* (Derigs and Marzban 2009). However, the Shariah rules of M&M suggest specific ways to deal with these instruments. They mainly focus on the terms and conditions of partnership, profit and loss sharing, risk mitigation and risk avoidance, asset ownership, and the mutual benefits of the involved parties (BNM 2007, 2010, 2012, 2015).

It is worth mentioning that there are no published Shariah guidelines that regulate *mudarabah* and *musharakah* (M&M)-based microfinancing. Hence, this study adopted most of the Shariah parameters prescribed by Bank Negara Malaysia (BNM), the main regulatory authority for the banking and finance sector. This organisation issues Shariah rules through the suggestions of its Shariah Advisory Council (SAC) (BNM 2012). However, specific parameters were chosen in this study in order to tackle the negative issues that prevent microfinance institutions from offering M&M financing. It is worth mentioning that four terms, namely identification (I), measurement (M), monitoring (MO) and controlling (CO), are generally

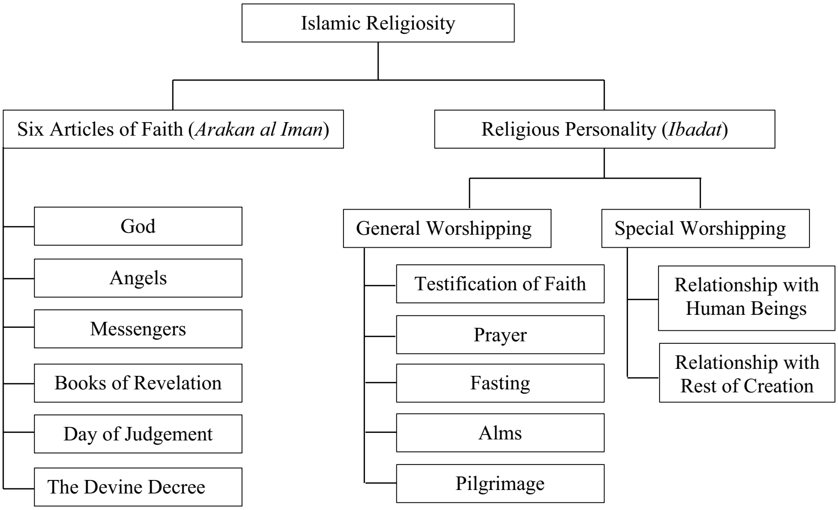

Fig. 1 Muslim religiosity measurement model

used in risk management in the finance and banking sector (Iqbal and Mirakhore 2011). In this regard, the Shariah rules are categorised herein according to these four purposes, viz. identifying appropriate clients, measuring the share of profit and loss while allocating the required amount of capital, monitoring business operations, and controlling risks to resolve the adverse selection, asymmetric information and agency problems that prevail in M&M financing.

Religiosity

According to Noble et al. (2007), Muslim people have an intrinsic and extrinsic orientation towards religiosity. Notably, intrinsic religiosity is the unification of being, the commandment of unity and the transcendence of all self-centred needs. It is an internalised belief which is useful for self-safety, social standing, solace and endorsement of the way of living. On the other hand, extrinsic religiosity combines the rituals and religious disciplines that are required to achieve spirituality (Noble et al. 2007). Krauss et al. (2005) developed a Muslim religiosity measurement model while conducting a broad research in collaboration with the Institute for Community and Peace Studies (PEKKA)[1] of Universiti Putra Malaysia (UPM) and Universiti Kebangsaan Malaysia (UKM) in order to develop a religiosity measurement scale for Malaysian Muslims. In 2007, they empirically studied the adaptation of that scale in Malaysia (Krauss et al. 2007). The Muslim religiosity measurement model is depicted in Fig. 1.

[1] Now renamed the Institute for Social Science Studies (IPSAS), a research wing of Universiti Putra Malaysia (UPM).

This model suggests that Islamic religiosity is articulated through six articles of faith (*Arakan al Iman*) and religious personality (*Ibadat*). *Arakan al Iman* combines the fundamentals of faith, such as the existence of God, angels, messengers, books of revelation, day of judgement and the divine decree. On the other hand, *Ibadat* is categorised into general worshipping and special worshipping. General worshipping comprises testification of faith, prayer, fasting, alms and pilgrimage. The purposes of special worshipping are to tighten the relationship between human beings and the rest of creation (Krauss et al. 2005).

Moreover, Islamic religiosity contributes significantly to enhancing micro-entrepreneurship and economic performance (Rulindo and Mardhatillah 2011), because Islam provides specific guidelines for economic activities and social behaviour that emphasise high ethical standards. A previous study found that observant religious clients had low default costs as well as minimum transaction costs (Chen et al. 2016). Besides, religiosity decreases idiosyncratic risks and volatility by improving moral characteristics (Adhikari and Agrawal 2016; Tepe et al. 2016). Overall, the principles of Islam positively affect financial dealings (Amaliah et al. 2015; Amin 2010; Johan and Putit 2016). Therefore, clients who are devout to Islam, possessing intrinsic and extrinsic religiosity, are expected to be morally good, socially well-connected, better entrepreneurs as well as safer business and financial partners.

Entrepreneurship

Entrepreneurship is the attempt to create new ventures by taking risks and introducing initiatives for the purpose of profit (Burns 2016). It is an undertaking by either an individual or entity with the aim of adding economic value to society (Ruiz et al. 2016). Fiet et al. (2006) classified entrepreneurship into three kinds: (1) aspiring, (2) nascent and (3) actual entrepreneurship. Aspiring entrepreneurs generally explore venture ideas and look for new opportunities. Nascent entrepreneurs search for ideas to create new ventures. This is a pre-entry phase of entrepreneurship, where an individual is about to give birth to a new firm (Salavou and Lioukas 2018). Actual entrepreneurs seek new business opportunities while running existing ones (Fiet et al. 2006). However, any kind of entrepreneurship must include actions to look for a market niche, develop human resources, adopt technological change and implement strategies. Nevertheless, entrepreneurial actions depend on entrepreneurial qualities such as creativity, taking the initiative, flexibility, responsibility, independence, prevision, anticipation, internalisation, dynamism, ability to treat people, orientation toward profit or gain, non-conformity etc. (Ruiz et al. 2016). In this regard, entrepreneurs' age, gender, education, entrepreneurial experience, industry experience, risk-taking ability, innovativeness and motivational ability influence their entrepreneurial practices (Levie and Autio 2013; Santos et al. 2012).

From the Islamic point of view, entrepreneurs must follow Shariah law while pursuing any venture. Shariah suggests that Muslim entrepreneurs must meet the needs of their society as well as satisfying religious obligations. In this regard, Arham (2010) outlined four vital components, viz. (1) spiritually, (2) materiality, (3) ethics and (4) humanity, that should be present in any venture carried out by Muslims.

Furthermore, to be productive by creating real goods and services and business capital, each venture must be interest free and bound by a profit and risk-sharing agreement. Islam also prohibits excessive risk and non-Shariah-compliant business practices (Hassan and Hippler 2014).

Methodology and Methods

This study adopted the survey method to generalise the findings, as well as achieve high external validity (Wolf 2016). The stratified convenient sampling technique was utilised to collect the data. The data were collected from underprivileged women entrepreneurs who were attached to the microfinance programme of Amanah Ikhtiar Malaysia (AIM), the largest microfinance institution in Malaysia. A self-generated structured questionnaire was administered among the female Muslim clients of AIM. To quantify the responses, a seven-point Likert scale[2] was applied in the questionnaire (Sapsford 2007). The survey covered ten AIM centres located in rural areas of Selayang and Cheras, Gombak District, Selangor State, Malaysia. It took about 6 months to complete the survey (the last quarter of 2014 to the first quarter of 2015). A total of 400 questionnaires were retrieved (excluding a pilot test study) from an equal number of respondents. After data screening, 330 questionnaires were selected for statistical analyses. The data were analysed by using exploratory factor analysis (EFA), confirmatory factor analysis (CFA) and structural equation modelling (SEM) (MacCallum 2009). Chi square, and some other fit indices such as root-mean-square error of approximation (RMSEA), normed fit index (NFI), PCLOSE, Tucker–Lewis index (TLI) and root-mean-square residual (RMR), were taken into account to confirm the fit of the data by the model (Hooper et al. 2008; Kenny 2015; Moss 2016; Schermelleh-Engel et al. 2003). Two software packages, namely SPSS (version 20) and AMOS (version 21), were employed to analyse the data. Exploratory factor analysis and reliability analysis were carried out to determine the dimensionality of the data (Ellahi & Bokhari 2013; Pallant 2005). Finally, the external validity or representativeness of the outcomes was ensured by combining statistical outputs and logical reasoning (Thietart and Wauchope 2001).

Data Analyses

Demographic Information

Among the 330 respondents, 19.1% were young adults (age 18–35 years, $n=63$), 72.1% were middle-aged adults (age 36–55 years, $n=238$), and the rest (8.8%) were older adults (age greater than 55 years, $n=29$). Most respondents were married (79.3%, $n=270$), while only 3.9% ($n=13$) were single (never married), 7.3%

[2] Strongly disagree = 1, disagree = 2, tend to disagree = 3, neutral = 4, tend to agree = 5, agree = 6, strongly agree = 7.

($n = 24$) were widowed, 6.1% were divorced, and 0.9% ($n = 3$) were separated. The majority were actively involved with business activities (66.9%, $n = 221$), while another 15.8% were homemakers.[3] About 7.3% of respondents were earning salaries from formal jobs,[4] and 10% were engaged with some other types of income-generating activity.[5] Almost all respondents had formal education. Only two respondents reported that they had never gone to school; six women had informal literacy, and another six women took elementary education. Furthermore, 69.4% ($n = 229$) of them achieved the SPM[6] certificate, and 8.2% ($n = 27$) STPM.[7] Only 7% ($n = 23$) had a bachelor degree and 1.5% ($n = 5$) a post-graduate degree, while the rest of the respondents (32, 9.7%) had completed 'Form 3' and diploma courses.

Exploratory Factor Analyses

This study adopted exploratory factor analysis (EFA) in order to create latent factors by clustering significant observed variables. In this regard, all Shariah rules were clustered into four factors, namely identification (I), measurement (M), monitoring (MO) and controlling (C). Simultaneously, three other factors, viz. religiosity (R), knowledge (K) and entrepreneurship (E), were created. The outcomes of EFA are presented below.

The significant value of the Kaiser–Meyer–Olkin (KMO) statistic (0.899) [for which a value ≥ 0.6 is commonly recommended (Neill 2008; Vogt 2005)] indicates that there is a strong relationship among the factors in a correlation matrix. In the same vein, the significant value of Bartlett's test of sphericity [χ^2 (11,944.836) = 1275, $p < 0.05$] suggests that the null hypothesis that the correlation matrix is an identity matrix[8] can be rejected. This implies that the underlying elements (observed variables) of each factor are not identical. The communalities table shows that most of the observed variables have values > 0.5, indicating that the underlying variables are well represented by the factors (Young and Pearce 2013). The scree plot in Fig. 2 depicts the eigenvalues against the number of factors. The values for the first seven factors are clearly high, while from the eighth factor, the line becomes almost horizontally. This means that the rest of the factors account for smaller variances (Brown 2009).

[3] They somehow engaged with business activities too, because having a business is a precondition for being a member of AIM. Besides, this study applied the stratification process to choose respondents with business experience or business knowledge.

[4] Cashier, nurse, manager, clerk, school bus driver, cook, baker, shop assistant, retiree, school teacher, supervisor, sales assistant, admin assistant and sideline manager.

[5] Tailor, consultant, house agent, wedding planner, dealer, promoter, spa therapist, designer, craftsman, financial adviser and contract driver.

[6] SPM stands for Sijil Pelajaran Malaysia (Malaysian Certificate of Education, which is equivalent to the General Certificate of Secondary Education).

[7] STPM stands for Sijil Tinggi Persekolahan Malaysia (Malaysian Higher School Certificate).

[8] An identity matrix is a matrix in which all the diagonal elements are 1 and all off-diagonal elements are 0.

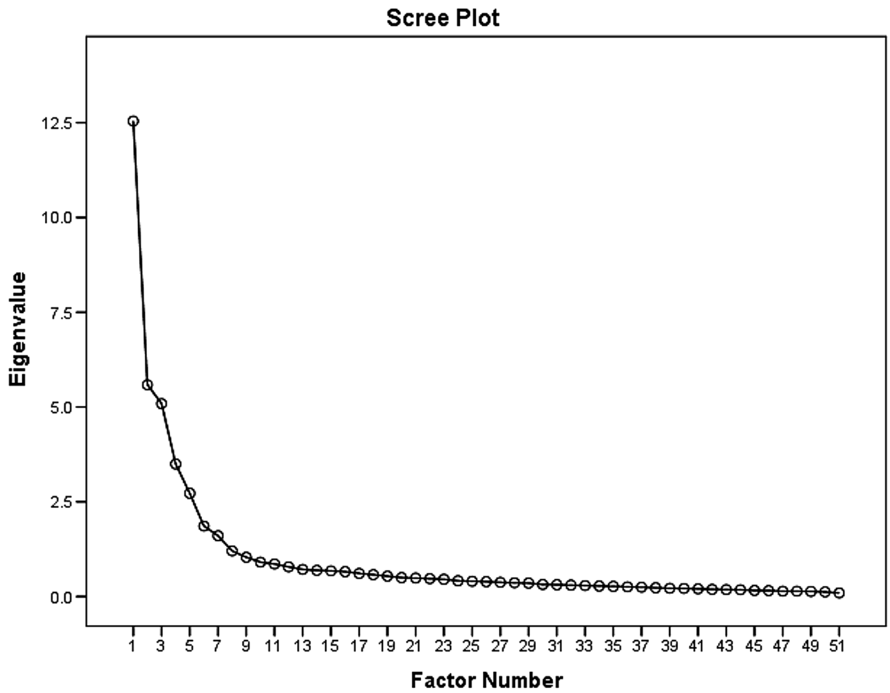

Fig. 2 Scree plot

Table 1 Factor correlation matrix

Factor	I	M	MO	C	R	K	E
Identification (I)	1.000						
Measurement (M)	0.472	1.000					
Monitoring (MO)	0.219	0.347	1.000				
Controlling (C)	0.311	0.265	0.179	1.000			
Religiosity (R)	0.092	0.076	0.280	0.240	1.000		
Knowledge (K)	0.127	0.183	0.266	0.426	0.479	1.000	
Entrepreneurship (E)	0.273	0.052	0.032	0.375	0.053	0.124	1.000

Extraction method: maximum likelihood. Rotation method: promax with Kaiser normalisation

The factor correlation matrix in Table 1 shows that all the factors are positively correlated with values below 0.5. This means that the variables are intercorrelated but not highly correlated, thus multicollinearity or singularity problems will not occur (Field 2000).

Confirmatory Factor Analysis (CFA)

Before conducting confirmatory factor analysis (CFA), a reliability test was carried out. The value of Cronbach's alpha for each factor was >0.8, indicating that all the factors are reliable and that the items (observed variables) belonging to the factors are consistent (George and Mallery 2016). To conduct CFA, the causal relationship among the variables is pictorially modelled as a 'measurement model' (Byrne 2010). This model is further modified to build a statically significant (well-fitted) model.

Measurement Model Building

A measurement model is built by using the factors created by EFA. In this model, the consistency of the latent variables with the underpinning observed variables seems to be improved (Fig. 3).

The model fit indices reveal that the CHIN/DF value of 2.46 is significant at $p<0.001$, the RMR value of 0.095 is higher than the cut-off point (recommended value 0.05–0.08), the goodness-of-fit index (GFI) of 0.78 and adjusted GFI (AGFI) of 0.70 are lower than the recommended thresholds (GFI >0.95, AGFI >0.90), and the comparative fit index (CFI) value of 0.85 is near to the cut-off point (recommended value >0.90). Furthermore, RMSEA is >0.05 (recommended value <0.07) and PCLOSE is 0.00. Based on the overall results, it can be concluded that the model does not fit the data. Presumably, this model contains some specification errors and requires further modification.

Re-specified Measurement Model

In this re-specified model, the CHIN/DF value is improved (1.69) but significant at $p<0.05$. The RMR value is within the cut-off point (0.075). Although the GFI and AGFI values are increased (to 0.87 and 0.84, respectively), they remain slightly below the cut-off points. However, the CFI value (0.95) reaches the level of significance. Furthermore, the TLI is 0.95, which is significant, and the NFI is 0.90, which is also significant (recommended 0.90). Importantly, the RMSEA is <0.05 (0.046) and PCLOSE is >0.05 (0.90). Based on the values of CFI, TLI, NFI, RMSEA and PCLOSE, this model can be considered to fit the data well (Fig. 4).

Convergent Validity and Discriminant Validity

The composite reliability (CR) of the factors in the model is >0.8 (recommended >0.7), and the average variance extraction (AVE) is >0.5. The maximum shared variance (MSV) and average shared variance (ASV) are lower than the value of the average variance extraction (AVE) (Hair et al. 2010). In addition, the value of Cronbach's alpha (α) of each factor is >0.8, which is significant (George and Mallery 2016). According to these findings, all the factors have achieved

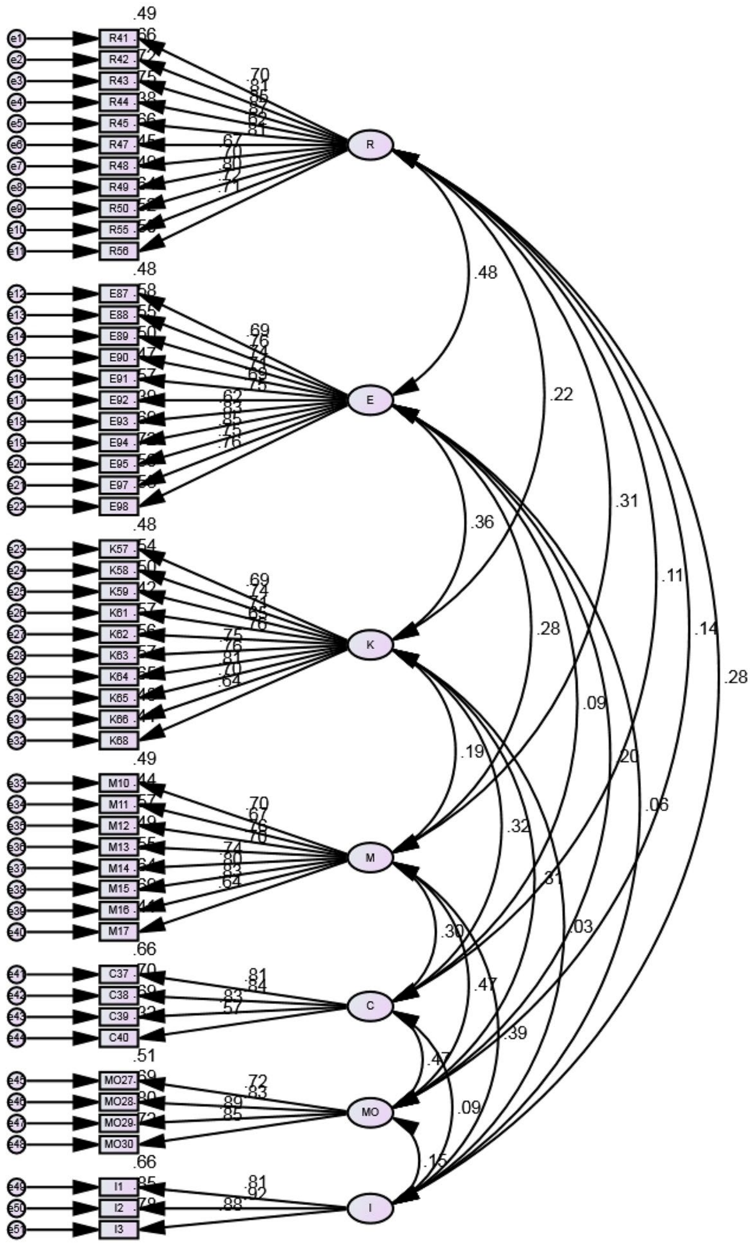

Fig. 3 Measurement model

reliability and convergent validity. In the same vein, the AVE for each factor is more than each of the squared correlations between factors (Hair et al. 2010). This means that all the factors have gained adequate discriminant validity.

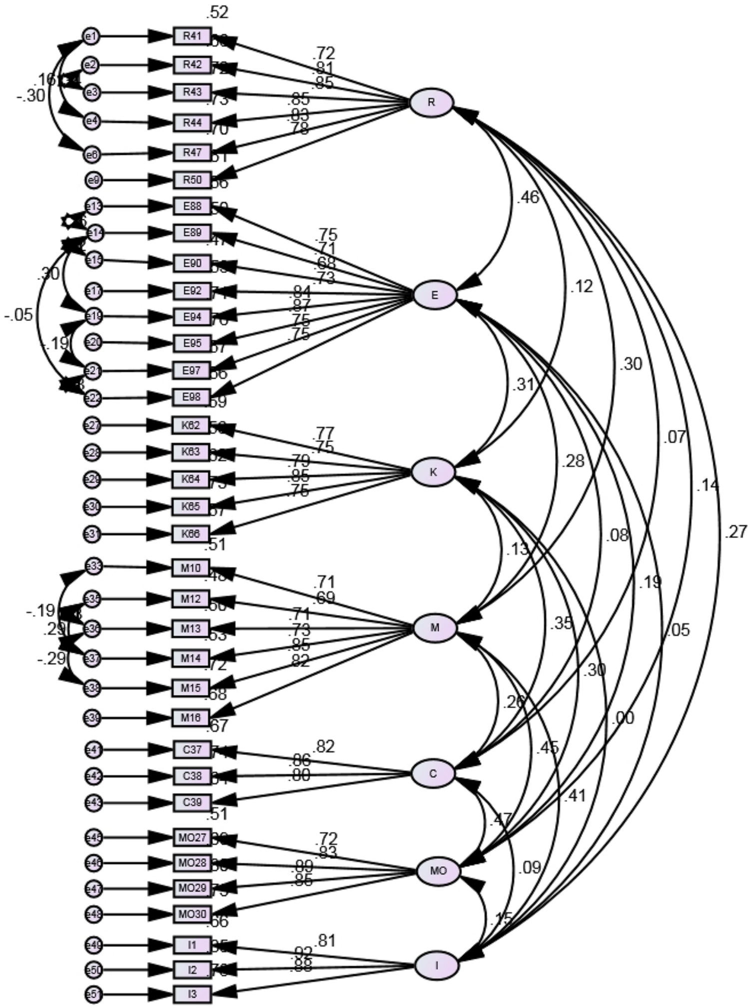

Fig. 4 Re-specified model

Findings and Discussion

The outputs of confirmatory factor analysis (CFA) suggest that all the factors including their underlying observed variables are consistent, reliable and valid. Each factor has achieved convergent validity as well as discriminant validity, while the 're-specified model' fits the data. Therefore, the significant values of factor loadings (β) (Table 2) can answer research questions 1 and 2. Hence, an elaborate discussion is presented below.

Table 2 Summary of results

Factor	Item	Observed variable	Item loading (β); $p < 0.001$	% of variance (cum. %)	Eigenvalue
Identification (I)	I1	Trustworthiness	0.814	23.44	11.95
	I2	Transparency	0.924		
	I3	Good morals	0.822		
Measurement (M)	M10	Assessing the required business capital	0.711	33.39	5.07
	M12	Capital sharing	0.700		
	M13	Loss sharing	0.708		
	M14	Goods and financial capital	0.730		
	M15	Ownership by paying lease rental	0.849		
	M16	Defining capital share in the mutual agreement	0.824		
Monitoring (MO)	MO27	Allowing regular audit	0.717	41.80	4.28
	MO28	Revealing production process	0.832		
	MO29	Revealing production cost	0.893		
	MO30	Revealing marketing and promotional cost	0.852		
Controlling (C)	C37	Business termination if the contractual period is over	0.817	47.74	3.02
	C38	Business termination if it is complicated	0.863		
	C39	Business termination if the capital is impaired	0.803		
Religiosity (R)	R41	Belief in *Shahadah*	0.720	53.02	2.68
	R42	Mandatory prayer	0.812		
	R43	Mandatory fasting	0.849		
	R44	Aspiration to *Haj*	0.855		
	R47	Reciting Quran	0.834		
	R50	Practising religious manner	783		

Table 2 (continued)

Factor	Item	Observed variable	Item loading (β); $p < 0.001$	% of variance (cum. %)	Eigenvalue
Knowledge (K)	K62	*Mudarabah*: both parties share the profit	0.766	56.67	1.86
	K63	*Mudarabah*: only financer bears the losses	0.756		
	K64	Familiar with the term *musharakah*	0.786		
	K65	*Musharakah*: both parties share profit and loss	0.853		
	K66	Financer can be in the management	0.753		
Entrepreneurship (E)	E88	Decision making	0.745	59.46	1.42
	E89	Problem solving	0.707		
	E90	Diligent	0.700		
	E92	Negotiation skill	0.732		
	E94	Idea generation	0.844		
	E95	Business evaluation	0.870		
	E97	Financial planning	0.754		
	E98	Experimentation	0.751		

Acceptance of Shariah Rules

Though respondents did not accept all Shariah parameters of M&M, they expressed a great deal of interest in those principles. In terms of 'identification', they prioritised trustworthiness, transparency and good morals but gave less importance to piety, good ethics, good social reputation, good credit history, diligent repayment and rule orientation. Respondents seemed willing to accept the basic rules of 'measurement', viz. assessing the required business capital, capital sharing, profit and loss sharing, accepting goods or financial capital as business capital, gaining ownership of the asset by paying lease rental and defining capital share in the mutual agreement. However, they showed inadequate interest in sharing loss as a penalty if the loss occurs due to client misconduct, liquidation of capital upon the termination of the business, leaving loss or gain to the ex-partner in case of share transfer, sharing the loss in the case of business termination in proportion to capital participation, accepting loss of capital as capital impairment, sharing profit in an agreed ratio and recapitalising if the business requires more capital.

In terms of 'monitoring', respondents expressed interest in some vital rules, such as regular auditing, revealing production process, revealing production cost and revealing marketing and promotional costs, but seemed not to be interested in joint management or revealing financial reports, market information or business information. For the 'controlling' purpose, respondents were willing to accept termination of the business in three circumstances: once the contractual period is over, if the business becomes complicated and if the capital gets majorly impaired, but were not willing to accept the joint decision-making process, employment of the manager by the MFI, involvement of the third party in the management, business termination if it incurs a loss, joint business policy amendment and business termination upon client's death.

The above findings suggest that the respondents were prone to accept those Shariah rules that are easy to understand as well as preserve their interests. Presumably, these types of rules are commonly practised in partnership businesses among Muslims in Malaysia. Since Malaysia is a Muslim-majority country and there is vibrant practice of Islamic finance and banking, Malaysian Muslims may somehow come into contact with Shariah financing rules in their daily life. Besides, their religious faith may influence their inclination to Shariah-based guidelines.

Levels of Knowledge, Religiosity and Entrepreneurial Skills

In terms of knowledge, the respondents of this study demonstrated primary knowledge of *mudarabah* financing. They knew that *mudarabah* is a profit-sharing partnership agreement where the financer shares a portion of the profit but bears all the business losses. They were also familiar with the term *musharakah*, where the financer can participate in the management of the business with the condition of profit and loss sharing. However, they seemed unaware of the critical terms and conditions of M&M financing; For instance, they did not know that clients have to pay compensation in the *mudarabah*-based scheme for any damage that occurs due to their negligence or reluctance. They seemed unaware that *riba*/interest-based transactions are sinful acts according to the Islamic religious view. They were also unaware of Islamic microfinance as a *riba*-free *halal* financing system and that M&M are collateral-free instruments. They did not know that *musharakah mutanaqisah* financing can facilitate their ownership of assets. These findings suggest that borrowers are less concerned about most of the attributes of M&M instruments, having only primary knowledge of M&M. Despite having no practice of M&M-based microfinance, they might learn those rules from the practices of commercial Islamic banks as well as from their religious literacy.

In terms of religiosity, respondents believed in the teaching of *Shahadah* (faith), which is the basic principle of *Iman* in Islam. They performed mandatory prayers five times each day and followed compulsory fasting during the month of *Ramadhan*. They recite the Quran and socialise in religious manners. All of them cherish the aspiration to perform *Haj*. On the other hand, they are not keen on paying *zakat*, joining religious meetings or being truthful. They do not seem to be eager to stay away from committing sin. Presumably, due to their low incomes, the rural poor are not compelled to pay *zakat*. Besides, a lack of education and financial insolvency may be the reasons for their delicate morals, as well as their weak practice of truthfulness and lack of wariness about committing sins.

In the light of the religiosity framework developed by Krauss et al. (2007), respondents in this study showed sound religious personality (*Ibadat*) in performing 'general worshipping', and according to the 'international religiosity measurement scale' of Khodayarifard (2016), they have firm religious beliefs and their devoutness to religious practices seems fair. According to Noble et al. (2007), this kind of religious performance can be explained as a sound combination of intrinsic and extrinsic religiosity. However, their religiosity seems more internalised, probably due to their way of living and socioeconomic standing.

Respondents' entrepreneurial competencies were found to be at the basic level. They are good at decision making, problem solving, diligence, negotiation, idea generation, business evaluation, financial planning and experimentation, but other competencies, such as enthusiasm for work, creativity, positive thinking, adaptation to change, organising, presentation skills and teamwork, did not reach the threshold of significance. This suggests that respondents did not possess all the qualities of actual entrepreneurship.

The overall findings suggest that respondents of this study were willing to accept the basic rules of Shariah and had basic knowledge of M&M financing. Presumably, they did not fully accept the underlying Shariah principles of M&M schemes because of a lack of proper awareness of Shariah rules, less knowledge about these products and lack of practical experience of PLS partnerships. It can be supposed that respondents tended to accept those Shariah parameters that are easy to understand and beneficial for them. They probably want to conceal financial information due to lack of trust. They are less likely agree to disclose all business information that would bring them competitive advantages ('revealing financial reports', 'revealing market information' and 'revealing business information'). Respondents seem very individualistic and independent in terms of making decisions regarding business management, termination and policy amendment. Besides, they might firmly hold to the persisting inheritance or legacy system of Malaysian society, which could be the reason why they did not accept ‘business termination upon borrower’s demise’. On the other hand, there is a sound presence of intrinsic and extrinsic religiosity in their lives. They seemed to have essential entrepreneurial qualities. Therefore, it can be assumed that, if they could fully understand M&M financing as well as become skilled in business management, they would be good performers under these financial schemes. Furthermore, their devoutness to religiosity might qualify them to be more trustworthy and loyal, while motivating them to abide by Shariah rules. If they accept all the Shariah rules, the complex issues of credit risks due to asymmetric information, agency problem and adverse selection would be mitigated. Therefore, microfinance institutions as investors would be more encouraged and inspired to offer M&M financing to this group of people.

Concluding Remarks

The findings of this study indicate that respondents’ willingness to accept Shariah rules, knowledge of M&M, devoutness to religiosity and entrepreneurial competencies do not reach the benchmark. In this regard, it can be argued that proper understanding of these financial products would encourage them to accept M&M financing as well as enhance their willingness to accept the underpinning Shariah rules. Besides, adherence to religiosity would motivate them to join M&M partnerships. Therefore, implementation of M&M would be viable if MFIs provided specific training to improve product awareness and entrepreneurial skills. In the same vein, promoting religiosity would bring additional benefits for both MFIs and clients. It might positively influence clients’ morals, making them loyal, transparent and trustworthy to MFIs. Since M&M are fiduciary products, building trust is one of the most crucial matters. However, by paying keen attention to religiosity, knowledge and entrepreneurship, major issues of credit risks could be eradicated. Thus, *mudarabah* and *musharakah* (M&M) could be viably applied to assist underprivileged entrepreneurial Muslim women in Malaysia.

Some measures can be proposed to minimise financial risks. M&M could be offered to people who are proven to be good entrepreneurs, have good financial records of dealing with others as well as a good reputation in society. The internal disclosure technique could be used. Since contemporary microfinancing practises group-based financing mechanisms, these techniques would help reduce information asymmetry. Besides, clients could be incentivised by their outstanding business operations as well as successful business completion. In addition, government initiatives and interventions might have effective results. In this regard, the government may assign third-party guarantors. This entity could be an independent institution for the purpose of addressing financial risks, funded via *zakat* and *waqf*. Notably, *zakat* and *waqf* funds are permitted to mitigate the risk of M&M-based investments (Mohieldin et al. 2012). Besides, benevolent loans, namely *qardul hassan*, could be offered to clients who get entangled with financial difficulties when running their business. Since such loans do not ask for any surplus return on the principal amount and offer time flexibility, this would be an effective tool to rejuvenate poorly performing businesses as well as ease the financial burden of clients. Further, an independent auditing organisation could be introduced to monitor M&M-based projects. However, scrutiny of the efficacy of these strategies requires further research.

Funding Funding was provided by Institut Pengurusan dan Pemantauan Penyelidikan (IPPP), University of Malaya *"Peruntukan Penyelidikan Pascasiswazah (PPP)"*-2013 (Grant Ref. No. UM.TNC2/IPPP/PPGP/638/PPP).

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