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# THE IMPACT OF ISLAMIC MICROFINANCE UPON POVERTY ALLEVIATION BY THE DEVELOPMENT OF MICROENTERPRISES IN MAURITANIA

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## **ABSTRACT**

Even though Islamic microfinance has proved to have a positive impact o poverty and microenterprises, there is a lack of studies on this topic in the case of Mauritania. This research attempts to study the role of Islamic microfinance (IsMF) products' usage on poverty alleviation through the mediation effect of microenterprises development (MEs) in Nouakchott-Mauritania. This quantitative study uses primary data collected from 381 beneficiaries of the IsMF institution PROCAPEC in Nouakchott through a cross-sectional time horizon design survey. Structural equation modelling (SEM) is used to test the hypothesis through the AMOS 23 software. Findings reveal that the usage of IsMF products has a positive impact on MEs. Also, it has been found that MEs have a positive impact on poverty alleviation by reducing its five dimensions (income, education, health, expenditure, and assets ownership). The results show that the MEs has a full mediation effect on the relationship between the IsMF products' usage and income, education, health, and expenditure; however, it has a partial mediation effect on the relationship of usage and assets. This study is among the pioneer to discuss this topic in the geographical context of Mauritania, where a scarcity of studies exists. It is recommended that policymakers adopt strategies enhancing the usage of Islamic microfinance products. The Mauritanian government is encouraged to develop the microenterprises sector to alleviate poverty in the country.

**Keywords:** Mauritania, Islamic microfinance, Poverty alleviation, Microenterprises, Structural equation modelling.

## INTRODUCTION

In Mauritania, there is a scarcity of studies on Islamic microfinance and its role in reducing poverty. There is barely any research about Islamic microfinance and microenterprises in alleviating poverty in Mauritania. A study conducted in Mauritania revealed that Islamic microfinance products such as Murabaha, Qard hasan, remittances and savings have a positive impact on increasing households' income and improving microenterprises development (Maouloud, Kassim, & Othman, 2021). Poverty is a devastating problem that affects many people worldwide, especially as it is still happening during a seemingly progressive and socially advanced era. There are a plethora of definitions of poverty, and various meanings can be found in different studies. For instance, poverty can be defined as a lack of basic needs, which causes deprivation in all life domains, and it is an unacceptable and unfair situation (Obayelu & Awoyemi, 2010). According to Cuenca-García, Sánchez, and Navarro-Pabsdorf (2019), the poor is anyone who has a low life expectancy, social inclusion, poor health, illiteracy, and lack of food and water. Sen (1992) stated that scarcity and low income are not the only factors explaining absolute poverty, but

it is also the deficiency in all fundamental necessities that a human being should have. Additionally, poverty in some African countries can be alleviated by diminishing the factors leading to poverty, such as lack of income, lack of education, lack of households' sustainable livelihoods assets, and financial exclusion (Adewale, 2014). Krantz (2001) stipulated that the livelihood assets (human, social, physical, financial, and natural) approach effectively alleviates poverty among households, which goes beyond the conventional methods that focus only on income to reduce poverty. Hence, the acquisition of valuable assets and their sustainability can reduce poverty among the less fortunate population. Poverty is a lack of income, unhealthy life, powerlessness, financial and social exclusion. Therefore, poverty is a multidimensional problem that requires rigorous attention to each dimension separately.

In Mauritania, the issue of poverty is alarming. Around 31 per cent of the population live in relative poverty, whilst 16.6 per cent of people live in absolute poverty (ECA, 2016). The World Bank (2018) indicated that real annual growth in terms of household expenditure per capita was only 1.52 per cent in 2014; the inequality (measured by the Gini index) was 31.9 in 2014; only 38 per cent of people use electricity, 45 per cent of children are not enrolled in school, one-third of household live in precarious housing. The topic of multidimensional poverty indexed has been extensively researched, and there has not been a study of this kind done in Mauritania yet. As far as the researchers' knowledge, this study's uniqueness is that it has not been applied in the case of Mauritania yet. Since Islamic microfinance can reduce poverty in different contexts, it is worth studying its effect on less fortunate Mauritanians.

Islamic microfinance reduces poverty and empowers the poor by providing Islamic services and funding their microenterprises (Adnan & Ajija, 2015; Mahmood et al., 2015). Islamic microfinance services increase household' income and expenditure (Fianto et al., 2017). Researchers on poverty alleviation concluded that the best way to exit poverty is to own sustainable assets to satisfy the poor's basic needs (Agbola, Acupan, & Mahmood, 2017; Savath, Fletschner, Peterman, & Santos, 2014). In the Islamic financial theory, it has been mentioned in numerous books and articles that easing financial access and providing a wide range of Islamic financial services can be useful in uplifting the country's economic situation and thereby reducing individuals' vulnerability (Iqbal & Mirakhor, 2013; Mohieldin, Iqbal, Rostom, & Fu, 2011). The relationship between financial development (financial inclusion), economic growth (microenterprises), and poverty alleviation have been widely discussed together in various empirical and theoretical studies (Beck, Demirgüç-Kunt, & Levine, 2007; Dusuki, 2008; Greenwood & Jovanovic, 1990; Honohan & King, 2018; Levine, 2005; Olufemi et al., 2015; Rashid & Ejaz, 2019; Umar & Ahmed, 2017).

Financing the microenterprises is one of the main objectives of IsMFIs, through which less fortunate population can enhance their financial position (Ahmed, 2002; Obaidullah, 2008). Islamic microfinance products are vital for those with only one microenterprise, their livelihood business, to enhance its performance and sustainability. Using financial products can make the poor more productive in earning their livelihood and income-generating activities (Asmawati & Ahmad, 2015; Tadesse & Zewdie, 2019). Islamic microfinance could help low-income entrepreneurs to create income generation and enhance their living standards (Adnan & Ajija, 2015; Mosaddak Ahmed Chowdhury, Rahman, & Salman, 2021). Nevertheless, some studies showed that Microfinance did not encourage low-income micro-entrepreneurs to grow their business, and it addressed only ultra-poor microentrepreneurs (Abbas & Shirazi, 2015). There are mixed findings on microfinance's effects on Microenterprises development, which have been discussed by several studies (Sani & Mohd-khan, 2016). In other words, microfinance has positively affected the development of SMEs in some countries but does not participate in the development of others in different contexts. A study from Indonesia found that microfinance products' usage may not affect microenterprises' development (Atmadja et al., 2018). Although Mauritania is a

Muslim country and an OIC member, research in Islamic finance is still rare. Only a few studies and reports from the IMF and World Bank have discussed the issues related to access to credit in Mauritania and the general financial system. Therefore, this research is filling a geographical gap and contributing to the worldwide controversy about the effectiveness of Islamic microfinance on poverty alleviation dimensions (income level, children's education, healthcare, expenditure, and assets ownership). The main objectives of this study are:

- **RO1.** To determine the impact of the usage of Islamic microfinance products on microenterprises development
- RO2. To examine the impact of microenterprises development on poverty alleviation
- **RO3.** To assess the mediating role of microenterprises development on the relationship between the usage of Islamic microfinance products and poverty alleviation

This research contains five sections, and it is organized as follows: the first section presents the introduction, which includes the background of the topic, the research gap, and the objectives of the study. The second section includes the literature review, which contains the theory underpinning the study empirical and conceptual studies found in the topic. The third section discusses the data and methodology. The fourth section shows the results, analysis, and discussions. Finally, the fifth section presents the conclusions and recommendations and opens areas for future studies.

#### LITERATURE REVIEW

Theory

The financial intermediation theory underpins this study. From this theory, the study uses the financial market imperfections theory. In this theory, financial intermediaries tend to overcome the financial market's deficiencies (Al-Jarhi, 2014). The financial market imperfections theory shows a necessity for a perfect and developed financial system to maintain the poor' lives and uplift their economic situation. This theory explains that individuals should have access to finance to increase their income, children's schooling, expenses, and independence from their parents' heritage (Becker & Tomes, 1979). To improve the economic situation of low-income people, financial inclusion should be enhanced. The reason for giving importance to financial inclusion lies in its effectiveness in boosting and faster the country's economy and individuals' well-being and alleviating poverty and vulnerability (Álvarez-Gamboa, Cabrera-Barona, & Jácome-Estrella, 2021). Financial development reduces the inequality between rich and poor, improves vulnerable lives, and enhances human development (Fowowe, 2017; Khaki & Sangmi, 2017).

According to Beck, Demirgüç-Kunt, and Levine (2004), there is no consensus in theory about finance's fundamental role in poverty alleviation; however, some studies have shown a positive relationship between finance and poverty alleviation. Financial development can boost the economy and alleviate poverty by funding small businesses and microenterprises (Beck, Demirgüç-Kunt, & Honohan, 2009; Demirguc-kunt, Klapper, & Singer, 2017). Providing financial access to microenterprises significantly impacts economic growth and poverty alleviation (Dupas & Robinson, 2013). Financial development and financial intermediaries are the critical factors that increase economic growth and alleviate poverty by mitigating the asymmetry of information and transaction costs (Levine, 2005). The financial market imperfections theory relates poverty alleviation to the economic growth (microenterprises) and financial development (through financial inclusion). Indeed, financial development, which is achieved through a high rate of financial inclusion and development of financial institutions, can develop economic growth by increasing the performance and profitability of

microenterprises and then lead to poverty elimination among microentrepreneurs. Hence, the financial market imperfections theory is considered an umbrella of the entire model in this research.

### Past studies

Access to microfinance enables women to control their resources (Murshid, 2018) and improve their assets (Ukanwa et al., 2018). The usage of financing offered by Islamic microfinance institutions improved the microentrepreneur's assets owned, living standards, education level, ethical values, profitability, and sustainability (Aslam, 2014; Bhuiyan, Siwar, Ismail, & Omar, 2017; Mohamed & Fauziyyah, 2020). According to Bhuiyan and Siwar (2017), microfinance leads to the development of income-generating activities, thereby reducing poverty among microfinance customers. This is due to the excellent investment of finance taken from microfinance institutions and the monitoring of the business process by microfinance operators. Microenterprises can be improved by Islamic equity-financing modes, which enable the reduction of agency risks to sustain and elevate the economic situation of low-income people (Adnan & Ajija, 2015; Shaikh, 2017). Nonetheless, Fianto, Gan, Hu, and Roudaki (2017) stipulated that the best financing method is debt-based contracts for Islamic microfinance institutions because it is more effective than equity-financing. In other words, the study confirms that clients benefit more from Murabaha contracts than Mudharaba and Musharaka contracts.

A study conducted by Mahmood, Hussain, and Matlay (2014) has investigated the effect of microfinance loan size on the development of microenterprises owned by women. The study discussed that microfinance institutions significantly affect income-producing activities through peer monitoring strategies, advice, training opportunities, and regular meetings. MFIs improve women's financial independence, empowerment, and business skills. The findings also revealed that the larger the loan taken, the lower the income generated; thus, women should take only small size loans to gain more profits. Previous studies have shown the positive role of Islamic microfinance in encouraging and developing businesses and microenterprises (Nobi, Billah, & Shohel, 2021; Rokhman, 2013). In Ghana, microfinance beneficiaries have improved their socio-economic status by using the financial products offered (Dzisi & Obeng, 2013; Koomson & Danquah, 2021). A similar impact can be obtained in Mauritania due to the similarity in both countries' economic conditions.

Entrepreneurship means starting or reestablishing a business for making a profit by utilizing the efficiently economic resources that the entrepreneur has (Hussain, Bhuiyan, & Bakar, 2014). Entrepreneurship development is crucial in eliminating poverty by generating an income that makes an individual financially self-independent. Apart from the economic benefit, entrepreneurship has a social impact on individuals by giving them a sense of possession and self-confidence. According to Ahmed (2002), small and medium enterprises have a fixed number of workers or a fixed capital. The SMEs can be different based on their economic situation or the owner's financial status or qualifications. Less fortunate people mostly own income-generating activities (IGAs) to make a living and be financially independent. Islamic microfinance increases the poor's income by financing their microenterprises, their primary revenue source (Asmawati & Ahmad, 2015; Beck, Lu, & Yang, 2015). Additionally, there is a positive impact of using microfinance products on microenterprises' performance (Alkhan & Hassan, 2021; Rathiranee & Semasinghe, 2016).

Shaikh (2017) suggested that Mudharaba is an ideal method to fund medium and small microenterprises (MSEs) and boost the economy of less fortunate people, ultimately leading to poverty alleviation. However, Mudharaba was not proven to be useful for microenterprises. Several studies found that the usage of financial products helped increase business, had a significant effect in minimizing the incidence of poverty, and improved the well-being of the poor (Lacalle-Calderon, Perez-Trujillo, & Neira,

2018; Miled & Rejeb, 2015). Entrepreneurship has a positive impact on poverty alleviation; in particular, women entrepreneurs have a high potential to reduce poverty (Bruton, Ketchen Jr, & Ireland, 2013; Hussain et al., 2014; Tobias, Mair, & Barbosa-Leiker, 2013). Micro-business development increased expenditure, assets ownership, and income (Hassan, 2015). The expansion of microenterprises positively impacts the country's economic condition and, eventually, on poverty alleviation, especially for women (Abrar, Hasan, & Kabir, 2021; Bansal & Singh, 2020; Othman, 2015).

Providing suitable Islamic microfinance products to the poor raises their financial inclusion and leads to a successful business (Hassan, 2015). An increase in microfinance products' usage has a significant impact on women's income, expenditure, health care, and nutrition (Mahmood et al., 2014). Microfinance's financing modes help women gain shared prosperity (Othman, 2015) and reduce poverty, primarily by increasing their income (Al-Shami, Majid, Rashid, & Hamid, 2013; Kasali, Ahmad, & Lim, 2015; Mazumder & Lu, 2015). Further, microfinance empowers women (Tafese, 2014; Weber & Ahmad, 2014), reduces their vulnerability (Khaki & Sangmi, 2017), and increases their financial independence and sense of self-possession (Hassan & Saleem, 2017). Microfinance is suitable for poor microentrepreneurs more than other financial institutions such as banks (Abbas & Shirazi, 2015), even the quality of services in microfinance institutions is better (Cull, Demirgu, & Morduch, 2009). Islamic microfinance is more suitable to attract the poor to include them in the formal financial system. Islamic microfinance can enhance financial inclusion through different tools and alleviate poverty (Mohieldin, 2012; Selim & Farooq, 2020). Meanwhile, Islamic microfinance is more moral-based than profit-based (Ahmed, 2002; Begum, Alam, Mia, Bhuiyan, & Ghani, 2019; Khaleequzzaman, 2007); thus, these institutions are not only for Muslims but also for non-Muslims. In contrast, conventional microfinance makes the poor overwhelmed with debt and high-interest rates (Begum et al., 2019).

Furthermore, in some African countries, such as Ethiopia and Ghana, microfinance significantly reduces poverty by empowering women (Dzisi & Obeng, 2013; Tafese, 2014). In Kenya, however, some obstacles slow the microfinance sector's development and impede access to finance, such as the low level of education, low network telecommunication, and inadequate necessary infrastructure, like roads (Ali, 2017). Even though numerous studies agreed on the positive effect of microenterprises on poverty alleviation, few studies found that entrepreneurship plays an insignificant role in reducing poverty (Kakembo, Abduh, & Salleh, 2021; Yanya, Abdul-Hakim, & Abdul-Razak, 2013). Several studies have studied microenterprises' mediation role in the relationship between poverty alleviation and social finance and microfinance institutions (Adewale, 2010; Hamad, 2018). These studies revealed that microenterprises have a significant effect on poverty alleviation. Therefore, using microfinance products alone will reduce poverty without economic activity. Microfinance institutions' beneficiaries should invest the funds obtained in productive activities to improve their social and economic well-being. The main purpose of testing the mediating effect of a variable is that there is no obvious direct relationship between the dependent and independent variables (James & Brett, 1984).

On the other hand, conventional microfinance enhances SMEs' growth; for instance, the Self Help Group (SHG) has played an essential role in alleviating some Indian's poverty by financing small business. A study conducted by Sivachithappa (2013) on 186 women in India revealed that SHG had empowered women by using loans in income-generating activities. Further, the results found that women became more independent in decision-making due to the increased income and assets. Also, Amanah Ikhtiar Malaysia (AIM), a microcredit organization, has helped numerous Malaysian women increase their income by financing small businesses and microenterprises (Samer et al., 2015).

For answering and achieving the third research objective, which attempts to examine whether the development of the variable microenterprise has a mediator role on the relationship between the usage of IsMF products and poverty alleviation, the methodology of (Baron & Kenny, 1986) is used. Therefore, the following hypotheses are formulated.

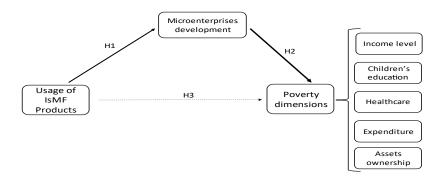


Figure 1. Conceptual framework

- **H1**: Usage of Islamic microfinance products has a significant impact on Microenterprises development in Nouakchott.
- H2. Microenterprises development has a significant impact on poverty dimensions
  - H2a. Microenterprises development has a significant impact on income.
  - H2b. Microenterprises development has a significant impact on education.
  - H2c. Microenterprises development has a significant impact on health.
  - H2d. Microenterprises development has a significant impact on expenditure.
  - H2e. Microenterprises development has a significant impact on assets ownership.
- **H3.** Microenterprises development mediate the relationship between usage of IsMF products and poverty alleviation.
  - H3a. Microenterprises development mediate the relationship between usage of IsMF products and income.
  - H3b. Microenterprises development mediate the relationship between usage of IsMF products and education.
  - H3c. Microenterprises development mediate the relationship between usage of IsMF products and health.
  - H3d. Microenterprises development mediate the relationship between usage of IsMF products and expenditure.
  - H3e. Microenterprises development mediate the relationship between usage of IsMF products and assets ownership.

# **METHODOLOGY**

Sampling and data

This research uses primary data collected through a questionnaire distributed to 700 beneficiaries of PROCAPEC (the largest Islamic microfinance in Mauritania). Only 493 questionnaires were returned. The missing data were treated with multiple imputations, and outliers were completely deleted as recommended by (Tabachnick, Fidell, & Ullman, 2007). The usable data is 381 after data cleaning. The population of the study is the beneficiaries of the PROCAPEC- Nouakchott. This study has used purposive sampling method based on two criteria which are: firstly being a beneficiary of PROCAPEC-Nouakchott, and secondly having a business or a microenterprise.

Exploratory Factor analysis (EFA) through principal components extraction analysis and varimax rotation. The factors were loading properly in their factors except for a few items, which were deleted later. Before conducting SEM, confirmatory factor analysis (CFA) was done for every variable individually to ensure its validity and reliability and verify the loading factors are in line with the rules of thumb. After ensuring that all assumptions of SEM are met, the researcher uses AMOS 23 to test the hypothesis. The items in this study were adapted from different studies mainly (Adewale, 2010; Issed, 2017; Khan, 2017; Riwajanti, 2014).

## Measurement of variables

# Measurement of the dependent variable

The dependent variable in this study is poverty which has five components, income level, children's education, healthcare, expenditure, and asset ownership. All of these are measured through a five-point Linkert scale ranging from 1 (strongly disagree), 2 (disagree), 3 (neutral), 4 (strongly agree), and 5 (strongly agree). During the EFA stage, some items were deleted. Income, expenditure, and assets have six items, while education and healthcare have four items.

#### Measurement of the independent variable

The study's independent variable is the usage of Islamic microfinance products offered in PROCAPEC-Nouakchott. The variable is self-developed, and it is measured by a four-Linkert scale ranging from 1(never used), 2(rarely used), 3(sometimes used), 4 (frequently used). The products here are four: Murabaha, Qard Hassan, Saving, and Remittance.

# Measurement of mediating variable

The mediating variable in this study is the development of the microenterprise managed by Mauritanians, who are beneficiaries of Islamic microfinance PROCAPEC located in Nouakchott. The items of the variables were adapted from different studies with some modifications. The variable has eight items, but three were deleted due to the factor loadings in the measurement model. The variable is measured by a five-Linkert ranging from 1 (strongly disagree), 2(disagree), 3(neutral), 4(strongly agree), and 5 (strongly agree).

**Table 1.** Summary of construct reliability test

Construct	Number items	of	Cronbach's alpha
Use	4		0.796
MEs	8		0.957

Income	6	0.899
Education	4	0.988
Health	4	0.980
Expenditure	6	0.976
Assets	6	0.978

Based on Table 1, it is obvious that the Cronbach alpha for all the variables is greater than 0.7, which is a very good indicator of reliability, and it shows that the constructs are reliable (Babikir et al., 2009; Ragab & Arisha, 2017).

# **RESULTS AND DISCUSSIONS**

Measurement model

Before doing SEM, the measurement model must be analyzed to verify the factor loading of all items.

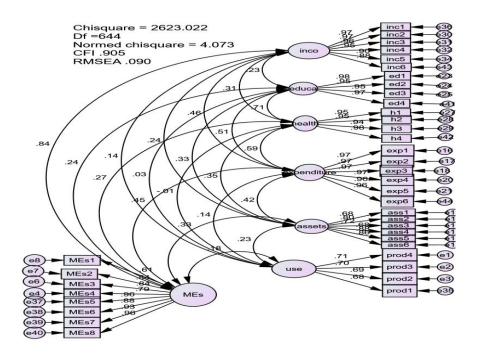


Figure 2. Measurement model

Figure 2 shows that the model is not a fit model. There are indispensable corrections that must be done to modify the model by either deleting items or correlating errors or doing both. The modified model is represented in Figure 3. Based on Figure 3, the model is now fit, and it has an excellent index, Normed chi-square <5; CFI>0.9; RMSEA<0.08; TLI>0.9; IFI<0.9; GFI>0.9; NFI>0.9; and AGFI>0.9.

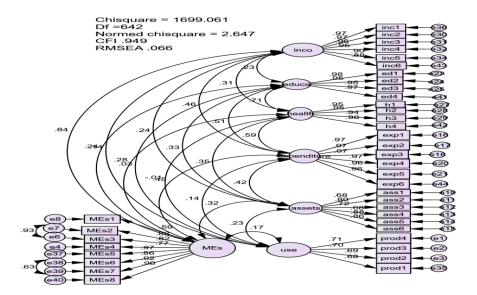


Figure 3. Modified measurement model

Following obtaining a fit measurement model, there is a need to measure the composite reliability and convergent validity to ensure that the variables in the study are valid and the relationships between them are meaningful. Table 2 shows no validity issue in the model, and all the variables are valid. The composite reliability (CR) of usage is 0.798 > 0.7. The composite reliability of M.E.s is 0.957>0.7. For the variable assets, the C.R. is 0.899. The composite reliability of expenditure, education, health, and income is 0.988, 0.980, 0.976, and 0.978, respectively. The rule of thumb is that composite reliability should be more than 0.7, and convergent validity should be more than 0.5 (Kothari, 2004; Tabachnick et al., 2007). There is no problem with the reliability and validity of all the constructs used in this study.

Table 2. Reliability and validity of the model

	CR	AVE	MSV	Max	Use	MEs	Assets	expend	Educat	Health	Incom
				R(H)							
Use	0.796	0.502	0.052	0.800	0.703						
MEs	0.957	0.738	0.718	0.972	0.178	0.859					
Assets	0.899	0.601	0.178	0.917	0.227	0.324	0.775				
Expend	0.988	0.934	0.354	0.989	0.138	0.452	0.421	0.967			
Educat	0.980	0.925	0.499	0.982	0.021	0.241	0.334	0.515	0.962		
Health	0.976	0.910	0.499	0.979	-0.016	0.273	0.348	0.595	0.707	0.954	
Incom	0.978	0.880	0.718	0.984	0.141	0.847	0.240	0.462	0.230	0.305	0.938

Hypotheses Testing and discussion

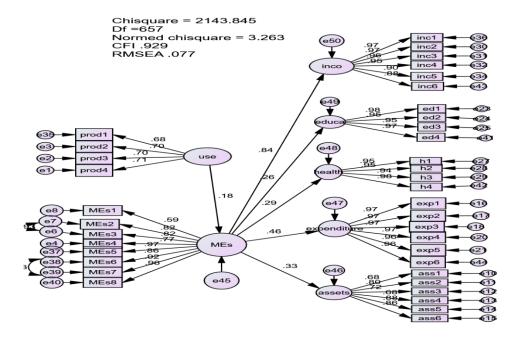


Figure 4. SEM model

Referring to the results presented in Table 2, the model is fit and has an excellent fit index, which all are in line with the rules of thumb. The factor loadings are all acceptable and above 0.6.

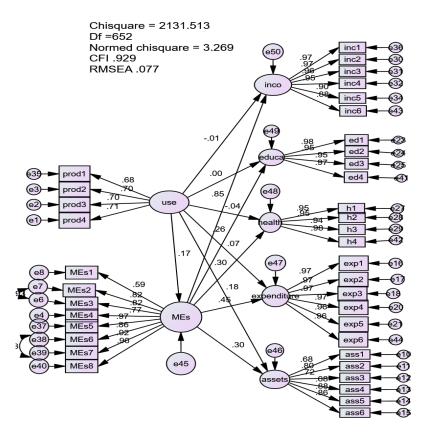


Figure 5. Full-fledged model

Based on Table 3, the model has excellent indices based on the rule of thumb. Therefore, it has no issues in reliability or validity. Hence, the process of testing hypotheses can be pursued.

Table 3. Model fit indices

Index	P-value	Cmin/df	CFI	RMSEA	NFI	IFI	TLI
Value	0.000	3.279	.929	.077	.901	.929	.923
Cut score	< 0.005	<5	>90	<.08	>.90	>.90	>.90
Decision	Fit	Fit	Fit	Fit	Fit	Fit	Fit

According to Table 4, the hypothesis (H1) is supported; hence it is accepted. Table 4 shows that the p-value is (0.003)<0.05, and the absolute value of C.R. is 2.986>1.96, which indicates that the values are above the cut score in the rule of thumb; thus, the relationship is significant. This hypothesis indicates that the usage of IsMF products directly impacts microenterprises' development. For the customers who use the Islamic microfinance products, their microenterprises development will be augmented. This result confirms the findings of (Dupas & Robinson, 2013; Rathiranee & Semasinghe, 2016; Shaikh, 2020) that the effective use of Islamic microfinance products can enormously increase the performance and profitability of microenterprises.

Table 4. Regression weights

			Estimate	S.E.	C.R.	Р	Decision
M.E.s	<	use	.264	.088	2.986	.003	Supported
assets	<	MEs	.387	.066	5.850	***	Supported
expenditure	<	MEs	.662	.075	8.853	***	Supported
health	<	MEs	.466	.081	5.761	***	Supported
educat	<	MEs	.446	.090	4.959	***	Supported
incom	<	MEs	1.092	.061	17.785	***	Supported

The sub-hypothesis (H2a) is supported; hence it is accepted. Table 4 shows that the p-value is (0.000)<0.05, and the absolute value of C.R. is 17.785>1.96, which indicates that the values are above the cut score in the rule of thumb; thus, the relationship is significant. This hypothesis indicates that M.E.s has a direct impact on the income level. The customer who have developed their microenterprises or business, their income level has been increased.

Also, the sub-hypothesis (H2b) is supported; hence it is accepted. Table 4 shows that the p-value is (0.000) <0.05, and the absolute value of C.R. is 4.959>1.96, which indicates that the values are above the cut score in the rule of thumb; thus, the relationship is significant. This hypothesis indicates that M.E.s directly impact children's education. Therefore, clients who have developed their microenterprises invest in their children education.

The sub-hypothesis (H2c) is supported; hence it is accepted. Table 4 shows that the p-value is (0.000) <0.05, and the absolute value of C.R. is 5.761>1.96, which indicates that the values are above the cut score in the rule of thumb; thus, the relationship is significant. This hypothesis indicates that M.E.s has a direct impact on healthcare. This finding can be explained by the fact that customers do not invest in health from the funds directly obtained from a microfinance institution.

Moreover, the sub-hypothesis (H2d) is supported, which is accepted. Table 4 shows that the p-value is (0.000) <0.05, and the absolute value of C.R. is 8.853>1.96, which indicates that the values are above the cut score in the rule of thumb; thus, the relationship is significant. This hypothesis indicates that M.E.s has a direct impact on expenditure. Customers who have developed their microenterprises increase their expenditure from the profit generated.

Lastly, the sub-hypothesis (H2e) is supported, which is accepted. Table 4 shows that the p-value is (0.000) <0.05, and the absolute value of C.R. is 5.850>1.96, which indicates that the values are above the cut score in the rule of thumb; thus, the relationship is significant. This hypothesis indicates that M.E.s directly impact the asset's ownership. This finding can be explained by the fact Customers who have developed their microenterprises invest more in owning assets for the business or even for their households.

The results obtained through the hypothesis (H2) confirm the findings of (Aslam, 2014; Begum, Alam, Mia, Bhuiyan, & Ghani, 2018; Farooqi, Qamar, & Chachi, 2017; Hassan, 2014; Hassan & Saleem, 2017; Hussain et al., 2014; Rokhman, 2013) that the poverty can be alleviated through well-founded and sustainable business.

Table 5. Bootstrapping mediation result

Hypothesis	Direct effect		Indirect effec	ct	Bootstrapping	
	Coefficient	p- value	Coefficient p- value		mediation result	
Use → income through microenterprises	029	.729	.343	.005	Full mediating effect	
Use → education through microenterprises	070	.812	.135	.035	Full mediating effect	
Use → health through microenterprises	176	.502	.142	.035	Full mediating effect	
Use→expenditure through microenterprises	.132	.270	.209	.034	Full mediating effect	
Use→assets through microenterprises	.359	.023	.112	.034	Partial mediating effect	

This study has used the bootstrap method to test microenterprises development's mediation effect on the relationship between Islamic microfinance products' usage and poverty alleviation. Based on the results presented in Table 5, each relationship's direct and indirect effect demonstrate a mediation effect of microenterprises development. The first sub-hypothesis (H3a) between the use of IsMF products and income has an insignificant direct effect (p-value=0.729>0.05) but a significant indirect effect (p-value=0.005<0.05). Therefore, microenterprises' development has a full mediation effect on the relationship between the use of IsMF products and income level. Additionally, the second sub-hypothesis (H3b) between use of IsMF products and children's education has an insignificant direct effect (p-value=0.812>0.05) but a significant indirect effect (p-value=0.035<0.05). Hence, microenterprises

development has a full mediation effect on the relationship between the use of IsMF products and children's education. Also, the third sub-hypothesis (H3c) between the use of IsMF products and healthcare has an insignificant direct effect (p-value=0.502>0.05) but a significant indirect effect (p-value=0.035<0.05). Thus, microenterprises development has a full mediation effect on the relationship between the use of IsMF products and healthcare.

The fourth sub-hypothesis (H3d) between use of IsMF products and expenditure has an insignificant direct effect (p-value=0.270>0.05) but a significant indirect effect (p-value=0.034<0.05). As a result, microenterprises development have a full mediation effect on the relationship between the use of IsMF products and expenditure. Besides, the fifth sub-hypothesis (H3e) between the use of IsMF products and assets ownership has a significant direct effect (p-value=0.023<0.05) as well as a significant indirect effect (p-value=0.034<0.05). Therefore, microenterprises development have a partial mediation effect on the relationship between the use of IsMF products and assets ownership.

To sum up the results, the third objective of the study has been achieved by finding that microenterprise development has a full mediation effect on the relationship between the usage of Islamic microfinance products and income, education, healthcare, and expenditure. However, it has a partial mediation effect on the relationship between the use of IsMF products and assets ownership in Nouakchott-Mauritania. As a result, the usage of Islamic microfinance products does not impact poverty alleviation unless there is the presence of microenterprises development, as confirmed by the studies of (Angeles, Calara, & de Guzman, 2019; Das & Mishra, 2021; Hameed, Mohammad, & Shahar, 2020). People getting funds from an Islamic microfinance institution without investing them in productive economic activities will not experience a poverty reduction, and it may even increase.

This result demonstrates that the microenterprises variable has a mediator effect between Islamic microfinance products' usage and poverty dimensions except for the variable assets. These results confirm the findings of the previous studies that demonstrated that microenterprises help reduce poverty (Bansal & Singh, 2020; Lacalle-Calderon et al., 2018; Miled & Rejeb, 2015). Those studies stipulated that microfinance cannot reduce poverty unless the beneficiaries have profitable economic activities. Consequently, the third objective of this study is attained.

# **CONCLUSION**

This study has empirically tested the impact of using Islamic microfinance products on the poverty dimensions through microenterprises development. The findings demonstrated that the usage of Islamic microfinance has a positive impact on the microenterprise's development. H1 is accepted. The hypothesis (H2), microenterprises development positively impacts poverty alleviation by increasing income, children's education, healthcare, expenditure, and assets ownership. The third hypothesis (H3), which investigates the mediation effect of microenterprises development on the relationship between the usage of IsMF products and poverty dimensions, has been tested. The results reveal that microenterprises development have a full mediation effect on the relationship between the usage of Islamic microfinance products and income level (H3a), children's education (H3b), healthcare (H3c), and expenditure (H3d). The direct relationship between Islamic microfinance and poverty was not significant; hence, Islamic microfinance cannot influence poverty unless the customers are involved in economic activities such as microenterprises. As a result, the financing taken from Islamic microfinance institutions did not impact the poverty level of beneficiaries who did not have a business or small income-generating activity. However, a partial mediation effect was found between the use of IsMF products and assets ownership

(H3e). The direct funds obtained from the IsMF institution can be used to possess more valuable assets without investing them in economic activity such as microenterprise. To sum up, islamic microfinance contributes to the development of microenterprises and then to the poverty alleviation in Nouakchott-Mauritania.

It is recommended that policymakers adopt strategies enhancing the usage of Islamic microfinance products. The Mauritanian government is encouraged to develop the microenterprises' sector to alleviate poverty in the country. Mauritanian microentrepreneurs are facing challenges to get finance. This study has proposed some policies to reduce microentrepreneurs' barriers to being economically and financially active. To improve the Mauritanians well-being, the five dimensions of poverty (income, education, health, expenditure, assets ownership) should be taken into consideration by the government and improved individually to reduce the persistent problem of poverty.

Even though this study has a great value added to the body of knowledge in microfinance and poverty, it has some limitations. Firstly, it is purely quantitative. Future studies can use qualitative methods to enrich the results of the study. This research has focused only on one microfinance institution in Nouakchott. Other studies may include other microfinance institutions or different financial institutions such as takaful institutions or Islamic banks in the Mauritanian context.

### REFERENCES

- Abbas, K., & Shirazi, N. (2015). The key players' perception on the role of Islamic microfinance in poverty alleviation: The case of Pakistan. *Journal of Islamic Accounting and Business Research*, 6(2), 244–267.
- Abrar, A., Hasan, I., & Kabir, R. (2021). Finance-growth nexus and banking efficiency: The impact of microfinance institutions. *Journal of Economics and Business*, 114 (2), 105975.
- Adewale, A. A. (2010). Glocalization of Microfinance as a Strategy to Alleviate Intergenerational Transmission of Poverty in Nigeria. Unpublished PhD, International Islamic University of Malaysia.
- Adnan, M. A., & Ajija, S. R. (2015). The effectiveness of baitul maal wat tamwil in reducing poverty the case of Indonesian Islamic microfinance institution. *Humanomics*, 31(2), 160–182. https://doi.org/10.1108/H-03-2012-0003
- Agbola, F. W., Acupan, A., & Mahmood, A. (2017). Does microfinance reduce poverty? New evidence from Northeastern Mindanao, the Philippines. *Journal of Rural Studies*, 50, 159–171.
- Ahmed, H. (2002). Financing microenterprises: An analytical study of Islamic microfinance institutions. *Islamic Economic Studies*, 9(2), 27–62. Retrieved from https://papers.ssrn.com/sol3/papers.cfm?abstract\_id=3164247&download=yes
- Al-Jarhi, M. (2014). Towards an economic theory of Islamic finance regulation. *Journal of Islamic Banking and Finance*, 2(1), 345–366.
- Al-Shami, S. S. A., Majid, I. B. A., Rashid, N. A., & Hamid, M. S. R. B. A. (2013). Conceptual framework: The role of microfinance on the wellbeing of poor people cases studies from Malaysia and Yemen. *Asian Social Science*, 10(1), 230.

- Ali, A. elrhman E. S. (2017). The challenges facing poverty alleviation and financial inclusion in North-East Kenya Province (NEKP). *International Journal of Social Economics*, 44(12), 2208–2223. https://doi.org/10.1108/IJSE-05-2016-0133
- Alkhan, A. M., & Hassan, M. K. (2021). Does Islamic microfinance serve maqāsid al-shari'a? *Borsa Istanbul Review*, 21(1). 57-68.
- Álvarez-Gamboa, J., Cabrera-Barona, P., & Jácome-Estrella, H. (2021). Financial inclusion and multidimensional poverty in Ecuador: A spatial approach. *World Development Perspectives*, 22, 100311.
- Angeles, I. T., Calara, M. S. P., & de Guzman, A. B. (2019). The mediating effect of microfinancing on access to finance and growth of microenterprises: evidence from the Philippines. *Journal of Global Entrepreneurship Research*, 9(1), 1–16.
- Aslam, M. N. (2014). Role of Islamic microfinance in poverty alleviation in Pakistan: An empirical approach. *International Journal of Academic Research in Accounting, Finance and Management Sciences*, 4(4), 143–152. https://doi.org/10.6007/IJARAFMS/v4-i4/1288
- Asmawati, & Ahmad, S. (2015). Impact of Islamic microfinance on improving the income and poverty reduction on microenterprises in province Aceh: Case Study in Baitul Qiradh. *Kontekstualita*, 30(2), 154–165.
- Atmadja, A. S., Sharma, P., & Su, J.-J. (2018). Microfinance and microenterprise performance in Indonesia: an extended and updated survey. *International Journal of Social Economics*, 45(6), 957–972. https://doi.org/10.1108/IJSE-02-2017-0031
- Babikir, H. E. H., Ali, A. B., elWahab, M. M. A. (2009). Research methodology step by step: guide for graduate students. *Sudanese Journal of Paediatricians*, *9*, 9–22. Retrieved from https://www.sudanjp.org/uploads/9/2/7/0/9270568/research\_methodology\_step\_by\_step\_guide for fraduate students.pdf
- Bansal, S., & Singh, A. K. (2020). Examining the social and entrepreneurial development of women through microfinance in Indian context. *Journal of Management Development*, 39(4). 407-421.
- Baron, R. M., & Kenny, D. A. (1986). The moderator—mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, 51(6), 1173.
- Beck, T., Demirgüç-Kunt, A., & Honohan, P. (2009). Access to financial services: Measurement, impact, and policies. *The World Bank Research Observer*, 24(1), 119–145.
- Beck, T., Demirgüç-Kunt, A., & Levine, R. (2004). Finance, Inequality, And Poverty: Cross-Country Evidence. The World Bank.
- Beck, T., Demirgüç-Kunt, A., & Levine, R. (2007). Finance, inequality and the poor. *Journal of Economic Growth*, 12(1), 27–49.
- Beck, T., Lu, L., & Yang, R. (2015). Finance and growth for microenterprises: evidence from rural China.

- World Development, 67, 38-56.
- Becker, G. S., & Tomes, N. (1979). An equilibrium theory of the distribution of income and intergenerational mobility. *Journal of Political Economy*, 87(6), 1153–1189.
- Begum, H., Alam, A. S. A. F., Mia, M. A., Bhuiyan, F., & Ghani, A. B. A. (2019). Development of Islamic microfinance: a sustainable poverty reduction approach. *Journal of Economic and Administrative Sciences*, 35(3). 143-157.
- Bhuiyan, A. B., Siwar, C., Ismail, A. G., & Omar, N. (2017a). The experiences of the Grameen and Islamic bank microfinance on the poverty alleviation in Bangladesh. *Journal of Islamic Economics, Banking and Finance*, 13(3), 64–81.
- Bhuiyan, A. B., Siwar, C., Ismail, A. G., & Omar, N. (2017b). The Islamic microfinancing contributions on sustainable livelihood of the borrowers in Bangladesh. *International Journal of Business and Society*, 18(S1), 79–96.
- Bruton, G. D., Ketchen Jr, D. J., & Ireland, R. D. (2013). Entrepreneurship as a solution to poverty. *Journal of Business Venturing*, 28(6), 683–689.
- Das, S., & Mishra, M. (2021). Testing the Indirect Effects on Entrepreneurial Orientation and Enterprise Performance. In: Rajagopal, Behl, R. (eds) Entrepreneurship and Regional Development. Palgrave Macmillan, Cham. (pp. 41–50). https://doi.org/10.1007/978-3-030-45521-7\_3.
- Demirguc-kunt, A., Klapper, L., & Singer, D. (2017). Financial Inclusion and Inclusive Growth: A Review of Recent Empirical Evidence. https://doi.org/10.1596/1813-9450-8040
- Dupas, P., & Robinson, J. (2013). Savings constraints and microenterprise development: Evidence from a field experiment in Kenya. *American Economic Journal: Applied Economics*, 5(1), 163–192.
- Dusuki, A. W. (2008). Banking for the poor: The role of Islamic banking in microfinance initiatives. Humanomics, 24(1), 49–66. https://doi.org/10.1108/08288660810851469
- Dzisi, S., & Obeng, F. (2013). Microfinance and the socio-economic wellbeing of women entrepreneurs in Ghana. *International Journal of Business and Social Research*, 3(11), 45–62.
- Fianto, B. A., Gan, C., Hu, B., & Roudaki, J. (2017). Equity financing and debt-based financing: Evidence from Islamic microfinance institutions in Indonesia. *Pacific Basin Finance Journal*, (July). https://doi.org/10.1016/j.pacfin.2017.09.010
- Fowowe, B. (2017). Access to finance and firm performance: Evidence from African countries &. *Journal of Advanced Research*, 7(1), 6–17. https://doi.org/10.1016/j.rdf.2017.01.006
- Greenwood, J., & Jovanovic, B. (1990). Financial development, growth, and the distribution of income. *Journal of Political Economy*, 98(5, Part 1), 1076–1107.
- Hamad, A. U. (2018). Alleviating Intergenerational Transmission of Poverty in Zanzibar via Islamic Social Finance.

- Unpublished Phd thesis, the International Islamic University of Malaysia.
- Hameed, W. U., Mohammad, H. Bin, & Shahar, H. B. K. (2020). Determinants of micro-enterprise success through microfinance institutions: a capital mix and previous work experience. *International Journal of Business and Society*, 21(2), 803–823.
- Hassan, A. (2015). Financial inclusion of the poor: from microcredit to Islamic microfinancial services. Humanomics, 31(3), 354–371. https://doi.org/10.1108/H-07-2014-0051
- Hassan, A., & Saleem, S. (2017). An Islamic microfinance business model in Bangladesh: Its role in alleviation of poverty and socio-economic well-being of women. *Humanomics*, 33(1), 15–37. https://doi.org/10.1108/H-08-2016-0066
- Honohan, P., & King, M. (2018). Cause and effect of financial access: cross-country evidence from the finscope surveys. *Banking the World*, (399). https://doi.org/10.7551/mitpress/9517.003.0005
- Hussain, M. D., Bhuiyan, A. B., & Bakar, R. (2014). Entrepreneurship development and poverty alleviation: an empirical review. *Journal of Asian Scientific Research*, 4(10), 558.
- Iqbal, Z., & Mirakhor, A. (2013). Economic development and Islamic finance. The World Bank.
- Issed, R. (2017). The Impact of Microfinance on Poverty Alleviation: A Case Study of Borrowers in Ramallah. Unpublished thesis, Birzeit University. https://doi.org/10.1111/j.1469-7610.2010.02280.x
- James, L. R., & Brett, J. M. (1984). Mediators, moderators, and tests for mediation. *Journal of Applied Psychology*, 69(2), 307.
- Kakembo, S. H., Abduh, M., & Salleh, H. M. P. (2021). Adopting Islamic microfinance as a mechanism of financing small and medium enterprises in Uganda. *Journal of Small Business and Enterprise Development*, 28(4).
- Kasali, T. A., Ahmad, S. A., & Lim, H. E. (2015). The role of microfinance in poverty alleviation: Empirical evidence from South-West Nigeria. *Asian Social Science*, 11(21), 183–192.
- Khaki, A. R., & Sangmi, M.-D. (2017a). Does access to finance alleviate poverty? A case study of SGSY beneficiaries in Kashmir Valley. *International Journal of Social Economics*, 44(8), 1032–1045.
- Khaki, A. R., & Sangmi, M.-D. U. D. (2017b). Does access to finance alleviate poverty? A case study of SGSY beneficiaries in Kashmir Valley. *International Journal of Social Economics*, 44(8), 1032–1045. https://doi.org/10.1108/IJSE-10-2015-0277
- Khaleequzzaman, M. (2007). Islamic Microfinance: Outreach and sustainability. In *A paper presented at IIUM International Conference on Islamic Banking and Finance* (pp. 23–25). 23rd to 25th April 2007 Kuala Lumpur, Malaysia.
- Khan, M. N. (2017). An impact assessment of Islamic microfinance on poverty alleviation: case of selected cities in Pakistan. Unpublished Phd thesis, IIUM

- Koomson, I., & Danquah, M. (2021). Financial inclusion and energy poverty: Empirical evidence from Ghana. *Energy Economics*, 94(1), 105085.
- Kothari, C. R. (2004). Research Methodology Methods and Techniques (SECOND REV). New Age International Publisher: India.
- Lacalle-Calderon, M., Perez-Trujillo, M., & Neira, I. (2018). Does microfinance reduce poverty among the poorest? a macro quantile regression approach. *Developing Economies*, 56(1), 51–65. https://doi.org/10.1111/deve.12159
- Levine, R. (2005). Finance and growth: theory and evidence. *Handbook of Economic Growth*, 1, 865–934.
- Mahmood, H. Z., Fatima, M., Khan, M., & Qamar, M. A. (2015). Islamic microfinance and poverty alleviation: an empirical ascertainment from Pakistan. *Journal of Islamic Economics, Banking and Finance*, 11(2), 85–105.
- Mahmood, S., Hussain, J., & Matlay, H. Z. (2014). Optimal microfinance loan size and poverty reduction amongst female entrepreneurs in Pakistan. *Journal of Small Business and Enterprise Development*, 21(2), 231–249. https://doi.org/10.1108/JSBED-03-2014-0043
- Maouloud, V. M., Kassim, S., & Othman, A. H. A. (2021a). Does usage of islamic microfinance products influence the income, education, and health in Mauritania? *Al Qasimia University Journal of Islamic Economics*, 1(2), 161–182.
- Maouloud, V. M., Kassim, S., & Othman, A. H. A. (2021b). impact of financial inclusion on poverty through Islamic Microfinance in Mauritania. In *Handbook Of Research On Islamic Social Finance And Economic Recovery After A Global Health Crisis. IGI Global, Pennsylvania, United States. ISBN 9781799868118 (In Press).*
- Mazumder, M. S. U., & Lu, W. (2015). What impact does microfinance have on rural livelihood? A comparison of governmental and non-governmental microfinance programs in Bangladesh. *World Development*, 68, 336–354.
- Miled, K. B. H., & Rejeb, J. Ben. (2015). Microfinance and poverty reduction: a review and synthesis of empirical evidence. *Procedia Social and Behavioral Sciences*, 195, 705–712. https://doi.org/10.1016/j.sbspro.2015.06.339
- Mohamed, E. F., & Fauziyyah, N. E. (2020). Islamic microfinance for poverty alleviation: a systematic literature review. *International Journal of Economics, Management and Accounting*, 28(1), 141–163.
- Mohieldin, M. (2012). Realizing the potential of Islamic finance. WP67644, World Bank Policy Research Working Paper Series, Washington, DC.
- Mohieldin, M., Iqbal, Z., Rostom, A., & Fu, X. (2011). The role of Islamic finance in enhancing financial inclusion in Organization of Islamic Cooperation (OIC) countries. Policy Research Working Paper WPS 5920. The World Bank.
- Mosaddak Ahmed Chowdhury, D., Rahman, S. M. K., & Salman, M. A. G. (2021). Economic & social

- impact of microfinance: an empirical evidence from Bangladesh. Global Journal of Management And Business Research. 21(1) 62-73.
- Murshid, N. S. (2018). Microfinance participation and women's decision-making power in the household in Bangladesh. *Journal of Social Service Research*, 43(3), 308-318.
- Nobi, M. N., Billah, M. A., & Shohel, A. (2021). Effectiveness of Islamic microfinance in alleviating poverty: empirical evidence from Bangladesh. *International Journal of Science and Business*, 5(4), 1–10.
- Obaidullah, M. (2008). Introduction to Islamic microfinance, IBF Net: The Islamic Business And Finance Network Limted India.
- Olufemi, P., Fapetu, O., Adewale, O., Adeyeye, P. O., Fapetu, O., Aluko, O. A., & Migiro, S. O. (2015). Does supply-leading hypothesis hold in a developing economy? A Nigerian Focus. *Procedia Economics and Finance*, 30(15), 30–37. https://doi.org/10.1016/S2212-5671(15)01252-6
- Othman, M. B. (2015). Role of women in achieving shared prosperity: An impact study of Islamic microfinance in Malaysia. *Social and Behavioral Sciences*, 211(September), 1043–1048. https://doi.org/10.1016/j.sbspro.2015.11.139
- Ragab, M. A., & Arisha, A. (2017). Research methodology in business: a starter's guide. *Management and Organizational Studies*, 5(1), 1. https://doi.org/10.5430/mos.v5n1p1
- Rashid, A. G., & Ejaz, L. (2019). Interest free micro credit loans: Pakistani female entrepreneurs. *Journal of Islamic Marketing*, 10(3), 860–873. https://doi.org/10.1108/JIMA-04-2018-0071
- Rathiranee, Y., & Semasinghe, S. D. (2016). The impact of micro finance factors on women entrepreneurs' performance in northern Sri Lanka. *International Journal of Social Science Studies Vol.*, 4(3), 94-99. https://doi.org/10.11114/ijsss.v4i10.1818
- Riwajanti, N. I. (2014). Islamic Microfinance in Indonesia: A comparative analysis between Islamic financial cooperative (bmt) and *Shari'ah* rural bank (BPRS) on Experiences, challenges, prospects, and roles in developing microenterprises. *Bulletin of Indonesian Economic Studies*, 50(3), 483–484. https://doi.org/10.1080/00074918.2014.980385
- Rokhman, W. (2013). The effect of Islamic microfinance on poverty alleviation: Study in Indonesia. *Journal of Economics and Business*, 11(2), 21–30. Retrieved from http://search.ebscohost.com/login.aspx?direct=true&db=buh&AN=94624663&site=ehost-live
- Samer, S., Majid, I., Rizal, S., Muhamad, M. R., Rashid, N., Halim, S., & Rashid, N. (2015). The impact of microfinance on poverty reduction: empirical evidence from Malaysian perspective. *Procedia Social and Behavioral Sciences*, 195, 721–728. https://doi.org/10.1016/j.sbspro.2015.06.343
- Sani, H., & Mohd-khan, S. J. (2016). Effect of social capital, loan and saving on the growth of SMEs in Nigeria: A proposed research framework. In *3rd Annual ECoFI Symposium* (pp. 978–983). 18-19 December 2016, Kedah, Malaysia.
- Savath, V., Fletschner, D., Peterman, A., & Santos, F. (2014). Land, assets, and livelihoods: Gendered analysis

- of evidence from Odisha state in India. World Bank Conference On Land And Poverty "The World Bank Washington DC, March 24-27, 2014 (Vol. 1323). Intl Food Policy Res Inst.
- Selim, M., & Farooq, M. O. (2020). Elimination of poverty by Islamic value based cooperative model. *Journal of Islamic Accounting and Business Research*. 11(5), 1121-1143.
- Shaikh, S. A. (2017). Poverty alleviation through financing microenterprises with equity finance. *Journal of Islamic Accounting and Business Research*, 8(1), 87–99. https://doi.org/10.1108/JIABR-07-2013-0022
- Sivachithappa, K. (2013). Impact of micro finance on income generation and livelihood of members of self help groups—a case study of Mandya district, India. *Procedia-Social and Behavioral Sciences*, 91, 228—240.
- Tabachnick, B. G., Fidell, L. S., & Ullman, J. B. (2007). *Using Multivariate Statistics* (Vol. 5). Pearson Boston, MA.
- Tadesse, G., & Zewdie, T. (2019). Grants vs. credits for improving the livelihoods of ultra-poor: Evidence from Ethiopia. *World Development*, 113, 320–329. https://doi.org/10.1016/j.worlddev.2018.09.009
- Tafese, G. S. (2014). The role of microfinance institutions in poverty reduction and women's empowerment in Ethiopia: the case of dedibit credit and saving institution. Research on Humanities and Social Sciences, 4(16), 38–47.
- Tobias, J. M., Mair, J., & Barbosa-Leiker, C. (2013). Toward a theory of transformative entrepreneuring: Poverty reduction and conflict resolution in Rwanda's entrepreneurial coffee sector. *Journal of Business Venturing*, 28(6), 728–742.
- Ukanwa, I., Xiong, L., & Anderson, A. (2018). Experiencing microfinance: Effects on poor women entrepreneurs' livelihood strategies. *Journal of Small Business and Enterprise Development*, 25(3), 428–446. https://doi.org/10.1108/JSBED-02-2017-0043
- Umar, M., & Ahmed, W. (2017). The role of microfinance on poverty alleviation and its impacts on people and society: evidence from the Grameen bank. *Journal of Poverty, Investment and Development*, 38, 7–13.
- Weber, O., & Ahmad, A. (2014). Empowerment through microfinance: The relation between loan cycle and level of empowerment. *World Development*, 62, 75–87. https://doi.org/10.1016/j.worlddev.2014.05.012
- Yanya, M., Abdul-Hakim, R., & Abdul-Razak, N. A. (2013). Does entrepreneurship bring an equal society and alleviate poverty? Evidence from Thailand. *Procedia-Social and Behavioral Sciences*, 91, 331–340.