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ROSCAs THROUGH THE ISLAMIC COMMUNITY: AN ALTERNATIVE TO ENHANCING ENTREPRENEURSHIP AND WEALTH

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ABSTRACT

The purpose of the study is to analyse the influence of the motives and benefits of participation in Rotating Savings and Credit Associations (ROSCAs) on household wealth and entrepreneurship through mediating community commitment. Structural equation modeling (SEM) was used on the data collected using purposive sampling and a sample of 225 respondents in the provinces of East Java, Central Java, West Java, D.I. Yogyakarta, and D.K.I. Jakarta. The results show that ROSCAs have a direct effect on entrepreneurial intention and may affect household wealth. It is also concluded that ROSCAs can be an instrument of Islamic social finance, as their characteristics are not burdensome to members. They involve the principle of cooperation, and are not affected by interest rates or inflation.

Keywords: ROSCAs, Community commitment, Household wealth, Entrepreneurial intention.
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I. INTRODUCTION

Inherent problems in Indonesia include poverty and lack of employment opportunities, which have increased unemployment and social problems, leading to limited public spending, and other problems related to environmental change (Suryahadi et al., 2017). To overcome these, it is necessary to take an innovative approach with a combination of social and business goals (Biancone & Radwan, 2019). Social finance based on charity, philanthropy and social services has emerged in the form of social entrepreneurship. Such finance appears in the private, public and non-profit sectors and is aimed at reducing social problems, alleviating poverty and strengthening relationships between entrepreneurs and society (Zietlow, 2002).

Indonesia is the leading country in terms of its comprehensive level of compatibility in the Islamic banking and finance (IBF) sector. Data show that in an optimistic scenario the potential for zakat is IDR 69.57 trillion, equivalent to 0.56% of GDP. Different results found that the potential for zakat in a realistic scenario is IDR 74.87 trillion, equivalent to 0.60% of GDP, or IDR 13.26 trillion equivalent to 0.11% of GDP (Asfarina et al., 2019). As a financial instrument, Zakat is transformed into social finance, which is needed in human and social, economic and public development (Tahiri Jouti, 2019).

A widely known Islamic financial model is a form of the Islamic social finance ecosystem that has special instruments in terms of funding and investment and which is in line with Islamic principles (Islamic law). Among the instruments employed by Islamic finance are waqf (Islamic endowment funds), zakat (compulsory almsgiving), alms (donations), and qard hasan (virtue of loans) (Wahyuni, 2012). In their Islamic Social Report, the Islamic Research and Training Institution states that the Islamic social finance sector has its own institutions and instruments that are in line with Islamic principles. The sector comprises can take the form of traditional Islamic institutions based on philanthropy (zakat, alms, waqf) and cooperation (qard and kafalah). Contemporary Islamic non-profit microfinance institutions use non-profit modes to cover their costs and maintain their operations (Umar Faruq Ahmad & Rafique Ahmad, 2009).

The embodiment of Islamic economics and finance in the community is the emergence of financial instruments involving local wisdom values. One such instrument is Rotating Savings and Credit Associations, hereafter referred to as ROSCAs. In several developing countries, ROSCAs are informal financial institutions that play a role in serving the financial services needs of most people (Bisrat et al., 2012). In Indonesia, ROSCAs are very familiar among the community, and also commonly part of community group activities, among household groups. ROSCA is a term used to simplify the concept of a financial system and has an attractive format as a financial institution in rural areas (Kharisma, Remi, Hadiyanto, & Saputra, 2020).

There are not many differences in the application of ROSCAs in conventional and Muslim communities, the most prominent being that in Muslim communities Islamic values are included in association activities. Sadr (2017) explains that the ROSCA is a microfinance scheme with interest-free financing practices. The Qard Hasan contract used is considered efficient and feasible as a financial intermediary or for household savings. In terms of benefits, ROSCAs are places to deposit

savings. They can also contribute to community participation in the economic sector by donating assets as capital for development (Goudarzi et al., 2016; Lewis et al., 2013; Tanaka & Iwasawa, 2010; Waite & Bourke, 2015).

1.1. Objective

The study aims to analyse the ROSCA financial instrument, whose mission is to help community members, and to establish whether it has an effect on improving the social economy of community members with entrepreneurial intentions. Five variables are analysed, namely ROSCA motives, ROSCA benefits, community commitment, household wealth, and entrepreneurial intentions. The research specifically aims to: (1) analyse the relationship between ROSCA motives and household wealth through community commitment; (2) analyse the relationship between ROSCA motives and entrepreneurial intention through community commitment; (3) analyse the relationship between ROSCA benefits and household wealth through community commitment; (4) analyse the relationship between ROSCA benefits and entrepreneurial intention through community commitment; (5) analyse the relationship between ROSCA motives and entrepreneurial intention through household wealth; and (6) analyse the relationship between ROSCA benefits and entrepreneurial intention through household wealth. The paper discusses the related background; explains the grand theory and research framework; explains the methodology; presents the results of the analysis and discussion; and finally draws conclusions and makes recommendations based on findings.

II. LITERATURE REVIEW

2.1. Background Theory

2.1.1. Islamic Social Finance

As the basis of Islamic finance thinking, Islamic jurisprudence has created an alternative financial instrument based on the concept of justice and prohibition of interest. Islamic finance emphasises contract transactions that are mutually agreed upon between parties (Al-Jarhi, 2017). In simple terms, social finance is defined as an allocation of capital that prioritises social returns and can be in the form of financial benefits. It will appear directly and indirectly in the environment that applies it (Azman & Ali, 2019). It involves three dimensions of capital, financial, risk and return, that are optimised for social or environmental returns. Islamic finance must seek innovative alternatives in developing its instruments, for example the association of the Islamic financial movement with the Islamic community, together with the strong moral orientation of such finance (Umar Faruq Ahmad & Rafique Ahmad, 2009).

Interest-based loans often make it difficult for borrowers to repay them (Ebrahim and Ahmed, 2006). Interest is one of the causes of poverty, so zakat is needed as an Islamic-based financial instrument that is free of interest involving usury. In addition, zakat can increase the independence and standard of living of its recipients because there is an obligation to allocate funds in a good way (Beik & Arsyianti, 2015; Ascarya, 2017b).

Islamic social finance consists of sadaqa, especially zakat, infaq, waqf, and social Islamic microfinance. In its implementation, a zakat-organising institution (baitul maal) collects and manages zakat, infaq and alms (ZIS) funds from members and the surrounding community. The collected zakat funds are then used for purposes determined through various consumptive and productive programmes, including qard for services to help loan recipients, especially the poor and needy. The funds allocated under the qard contract are expected to become independent capital for micro entrepreneurs. This explanation shows that Islamic social finance is a part of Islamic finance. (Ascarya, 2017a).

2.1.2. ROSCAs from the Islamic Perspective

Recently, many developing countries have developed innovative savings and credit schemes. One such scheme is the ROSCA, which currently exists in almost all Muslim countries and is run in accordance with the Islamic principles. They are known as Qard Hasan Associations (QHAs) (Sadr, 2017). This model is a form of Muslim community association that focuses on group financial services by reducing loan costs, facilitating savings and loan monitoring by all group members, providing savings services that can be directly monitored at any time, thus strengthening community-based finance (Bouman, 1995; Sadr, 2017).

In QHA savings and loans, each member contributes a fixed amount of cash to the association on a regular basis, with the money raised distributed among the association members for a predetermined period. The money is distributed in a predetermined order based on a random lottery. Members who have received money are excluded from the list in the next period; this process is followed until all members have received a share. However, the money can be used in another way; the lottery can be taken by order for members who need money for urgent purposes. In situations where members need funds or urgent needs, members can request to get their turn to take the money and agreed upon by the association (Bouman, 1995; Parry, 2010; Sadr, 2017).

An interesting practice in ROSCAs which has attracted the attention of Islamic studies is that the distribution of money is made evenly and randomly, as well as prioritising members in need. Moreover, ROSCA loans do not charge borrowers fees. This advantage makes ROSCAs a financial practice that applies the Qard Hasan contract. Therefore, QHA and ROSCA are similar concepts, platforms for households to save and finance their durable consumer goods (Besley et al., 1994) and to finance association member SMEs (Bouman, 1995).

ROSCAs are small public credit and savings schemes, which have developed for the benefit of households, not only financially (Bouman, 1995). They currently exist in almost all continents and their equivalents are in accordance with Islamic principles, namely the Qard Hasan Association (QHA) (Sadr, 2017). The development of ROSCAs has been rapid because the QHA structure is in accordance with the habits of the Muslim community (Sadr, 2017; Tahiri Jouti, 2019). The practice of interest-free financing implemented in ROSCAs shows that ROSCAs contracts based on the Qard Hasan principle are efficient and feasible as Islamic micro finance instruments (Sadr, 2017), although they have not yet been fully implemented. This also confirms that ROSCAs involve Islamic micro

finance activities that meet the criteria of Islamic compliance. Table 1 shows a more detailed explanation of the similarities and differences between QHAs and ROSCAs (Bouman, 1995; Sadr, 2017).

Table 1.
Differences and Similarities between QHAs and ROSCAs

	QHAs	ROSCAs
Differences	- QHA membership fee is based on number of loan requests - Facilitate members who need funds	- The fee for one pot is based on the agreement and willingness of each member - Distribution of funds to members according to the pot period in turn
Similarities	Both are Islamic micro finance instruments that are free from usury from the community concept	

Source: Bouman (1995) and Sadr (2017)

The QHA contract model is a microfinance vehicle that is capable of making a macroeconomic impact and ultimately contributing to a stable economic development process (Bouman, 1995; Sadr, 2017). In practice, adding community members can increase the size of the share capital pot, which extends the payback period for the pot recipients (Bouman, 1995; Sadr, 2017). Therefore, the flexibility of the capital turnover system of ROSCAs provides peace and comfort for all their members. This is interpreted as maslahah; in the concept of Islamic economics, this is the goal and hope of every Muslim activity. In ROSCAs concept, Islamic value added is more prominent than in QHAs, which tends to only prioritise capital supply. The size of the ROSCA determines the maximum benefit; that is, the number of members participating in it. On the other hand, in a QHA, the factor that affects the benefits is the demand for loans. Sadr (2017) states that individuals will find it more difficult to join a QHA if their income level is lower or higher than the average income of the community; that is, group size has an inverse U-shape relationship with members' income levels (Bouman, 1995; Sadr, 2017). This also clarifies the opportunity for ROSCAs as an Islamic microfinance system that is easily accepted by local communities in providing alternative capital solutions.

2.1.3. Benefits and Motives of ROSCAs

In their definition of ROSCAs, Mbizi and Gwangwava (2013) refer to a group of people who gather for a common goal for a certain period of time and conduct financial activities in the form of savings and loans with members of that community. ROSCAs fill many gaps in both developed and developing countries. They accommodate funds when debt and savings at formal financial institutions or credit facilities cannot be accessed by certain members of the public (Parry, 2010). Therefore, ROSCAs emerged and offer a savings and loan alternative with a definite foundation to alleviate the financial problems of the community who do not have a bank account, allowing them to save money and access financing. Participation in ROSCAs is considered beneficial because it provides access to interest-free financing, strengthens social relationships and provides a safe space

for people to meet. Such mechanisms have a very positive impact on low and very low-income communities who do not have access to the formal financial institution system.

The future motive for ROSCA participation is their ability to meet the capital needs of MSEs and deal with problems such as the potential for ROSCA complementarity or substitution. ROSCAs are community support mechanisms that help fragile households cope with specific crises through a network of informal and formal relationships. Mbizi and Gwangwava (2013) report a significant relationship between ROSCA membership and operational sustainability. In addition, social capital endowment at the village level has a positive correlation with ROSCA participation, thereby reducing poverty in local communities (Ademola Abimbola et al., 2020). This also explains that various forms of informal finance and micro institutions can reduce household poverty.

2.1.4. Community Commitment

Community commitment is an individual attitude. In this case, the concept of commitment is used as a predictor of an individual's actual behaviour towards their community, such as participating in community activities, offering help to the community, and solving problems for others (Boehm & Cohen, 2013). Considering the role of commitment in relation to actual behaviour in society, commitment should be treated as an attitudinal factor that is emphasised when members recognise the value of the ongoing relationship between their community and themselves (Kono et al., 2012). Commitment is classified as an attitude or behaviour that involves an emotional attachment to the community and often leads to strong community membership. The end result of actualising committed behaviour is a form of emotional attachment (Taormina, 1999). Measurement of community commitment can be made using three indicators: the sense of belonging in the community; the occurrence of activities to exchange information and opinions among community members; and the existence of information gathering activities that are useful for the community (Garbarino & Johnson, 1999; Hur et al., 2011).

2.1.5. Household Wealth

Financial planning is used to control household needs in order to achieve satisfaction and avoid family disputes. To attain household financial prosperity, families need to have knowledge of, appropriate attitudes towards, and be able to implement healthy family finances (Ademola Abimbola et al., 2020). With simple methods for savings, borrowing and budgeting, it is hoped that this will help families achieve their financial goals and secure a better future. Savings and loan activities through ROSCAs remain trusted by Indonesians as a simple financial service facility. In their development, ROSCAs function as non-formal financial institutions that aim to raise and channel funds through savings and loan activities (Mbizi & Gwangwava, 2013). They are simple financial institutions based on mutual trust, and provide social activities and gathering places for people who are close geographically, demographically and emotionally. Compared to other formal financial institutions, such as banks and financial institutions,

savings and loan ROSCAs are considered easier and faster in meeting the needs of household financial services. Moreover, the facilities for ROSCA loans can be directed to meet the unexpected needs of households and business. Widyastuti et al. (2019) measured household wealth using the dimensions of living standards, consumption, financial stability, tax compliance, and overall level.

2.1.6. Entrepreneurial Intention

Entrepreneurship is a type of support that determines the running of the economy, as the entrepreneurial sector has the freedom to work independently (Budac & Pentescu, 2015). If someone has the will and desire and is ready to be entrepreneurial, this means they will be able to create their own jobs. One of the factors that encourages entrepreneurial intentions is social support, which is one of the terms used to describe how social relationships are beneficial for the mental and physical health of individuals. Dunn and Holtz-Eakin (2000) define social support as physical and psychological comfort provided by an individual's friends and family. It is assistance that comes from people who have close social relationships with others who receive assistance. This form of support can be in the form of information, certain behaviour, or in material terms, which can make the individual who receives the assistance feel loved, cared for and valued.

Thompson (2009) measured entrepreneurial intention using the indicators of perceived desirability, perceived feasibility, and prosperity to act. In addition, there is environmental support, which refers to good and orderly environmental conditions in physical infrastructure, together with intangible aspects (human, capital, routine, and resources), which play a role in encouraging entrepreneurial intentions (Keh et al., 2007). In particular, there is financial support, such as the availability of venture capital, and services that support entrepreneurship, such as training opportunities, infrastructure loans, and physical and competition plans (Feldman, 2001).

2.2. Previous Studies

Previous research has analysed the relationship between ROSCAs and their impact on efforts to reduce poverty. The results show that by participating in ROSCAs, there is an opportunity to earn and use money for household needs (daily needs such as food, health, education, and assets, in the form of business capital). However, it has been found that there are other variables, namely household size and education level, that can reduce poverty at the household level (Anderson & Baland, 2002; Kharisma et al., 2020; Bisrat et al., 2012).

In another study which obtained similar results, Handa and Kirton (1999) found that the ROSCA sustainability was significantly attributed to the commitment of members to pay their dues consistently, and that the contractual relationship between the chairman and other members is for ROSCA transactions. Ambec & Treich (2007) and Adams & Sahonero (2015) studied the participation of Bolivians in ROSCAs, finding them very eager and willing to save financially, even when inflation is occurring, which adversely affects household finances. Other findings (Bisrat et al., 2012) suggest that ROSCAs offer several major forums that formal financial institutions do not have.

Empirically, ROSCAs provide services through savings mobilisation among households, friends and relatives. The research findings indicate that individual participation in ROSCA is by middle class households, such as self-employed workers, private organisations and SMEs (Kedir & Ibrahim, 2011; Calomiris & Rajaraman, 1998). Another interesting finding made by Ademola Abimbola et al. (2020) in a study on social capital was that offering social capital at the village level is positively correlated with ROSCA participation, and poverty reduction in local communities. Ebrahim and Ahmed (2006) explored the formulation of ROSCAs and integrated the mortgage design literature with them as a new means of interest financing or cooperative mortgage financing.

III. METHODOLOGY

3.1. Data

The study used primary data from distributing online questionnaires to Islamic household communities that participate in ROSCA activities. Using a purposive sampling approach, 225 respondents met the research criteria, namely that they were (a) individuals who participated in the Islamic community; (b) had participated in ROSCAs in the community; and (c) had a home business. The sampling was conducted in cities on the island of Java from April 7 2020 to June 25 2020. The research sample focused on the Islamic community in the Nahdlatul Ulama (Fatayat), and Muhammahdiyah (Aisyiah). Fatayat and Aisyiah are department of the both Muslim organization that focuses on empowering women and household wealth. This was because the two organisations have a strong history and foundation in developing grassroots communities in Indonesia. The sample justification for the study departed from Hair et al., (2010) with the total number of instruments multiplied by 10 (Hair et al., 2010). The instrument used was nineteen, so the sample of 225 conformed with the recommendation. Finally, the study has a varied sample spectrum, as described in more detail in Table 2.

Table 2.
Respondent Information

Frequency		Total	Percentage
Gender	Male	37	16.44%
	Female	188	83.56%
Age	23-36 years	64	28.44%
	37-50 years	137	60.89%
	> 50 years	24	10.67%
Participation in ROSCAs	< 1 years	43	19.11%
	2 - 4 years	124	55.11%
	> 4 years	58	25.78%
Islamic Organisation	Nahdlatul Ulama	145	64.44%
	Muhammadiyah	80	35.56%
Business Category	Food and Beverages	67	29.78%
	Convenience Store	54	24.00%
	Fashion	43	19.11%
	Service Business	61	27.11%

3.2. Method

The covariance-based structural equation modeling (CB-SEM) method was employed. CB-SEM is a multivariate technique combining aspects of factor analysis and multiple regression that allows researchers to simultaneously analyse a series of dependency relationships that are interrelated between the measured variables. The approach generally aims to estimate structural models based on theoretical foundations to test the causality relationship between latent constructs or variables, to measure the feasibility of the model and to confirm it according to empirical data (Bentler, 1990; Hair et al., 2010). CB-SEM is used if the model is complex, allowing the hypothesis testing to be performed appropriately. This is because CB-SEM has the power to test theories, such as model fit through incremental fit and absolute fit indexes with their respective standard regression estimates. Therefore, understanding related to theory and findings can be directed to the desired path from the basic theory (Hair et al., 2010).

The fit model in this study used three measures (the absolute fit index, incremental fit index, and parsimonious fit index). The absolute fit index is represented by the goodness of fit index (GFI), root mean square error approximation (RMSEA), and the standardised root mean square residual (RMR). The incremental fit index is represented by the Tucker Lewis index (TLI), the normed fit index (NFI), the comparative fit index (CFI), and the adjusted goodness fit index (AGFI). Finally, the parsimonious fit index is represented by Chi-Square/degree of freedom (x^2/df). The cut-off value of the fit model used was x^2/df <3, GFI > 0.90, AGFI > 0.80, CFI > 0.90, TLI > 0.90, NFI > 0.90, RMR < 0.09, and RMSEA < 0.08, in accordance with recommendations (Bentler, 1990; Hair et al., 2010; Tanaka, 1993).

The model was built based on results of previous studies. Five constructs were employed in the full model (see Table 3. The first construct of ROSCA motives was measured using three manifest variables (RM1, RM2, and RM3) adapted from Ademola Abimbola et al. (2020 and Mbizi and Gwangwava (2013). ROSCA benefits were measured using four manifest variables (RB1, RB2, RB3, and RB4), which were also adapted from Ademola Abimbola et al. (2020) and Mbizi and Gwangwava (2013). Community commitment was measured using three manifest variables (CM1, CM2, and CM3) adapted from Garbarino and Johnson (1999) and Hur et al. (2011). Household wealth was measured using four manifest variables (HW1, HW2, HW3, and HW4) adapted from Widyastuti et al. (2019). The final construct, entrepreneurial intention, was measured using five manifest variables (IE1, IE2, IE3, IE4, and IE5) adapted from Thompson (2009) and Kuckertz & Wagner (2010).

3.3. Model Development

There have been few studies on ROSCAs, especially ones that focus on the Islamic community. Therefore, this study uses the results of previous studies which intersect in building their hypotheses, including ones which have analysed the relationship between ROSCAs and poverty reduction.

Previous studies shown from the perspective of people participating in ROSCAs who use the money for household needs (food, health, education, assets,

and business activities); household size, education level, and other variables can increase income so that household welfare improves (Anderson & Baland, 2002; Kharisma et al., 2020; Bisrat et al., 2012). The following hypotheses are proposed:

H1: ROSCA motives have a positive effect on household wealth.

H2: ROSCA benefits have a positive effect on household wealth.

Empirically, the research results show that participation in ROSCAs is related to how community members use the income earned to meet their needs, most of which is employed as capital for building new businesses (Bisrat et al., 2012). Furthermore, ROSCAs as institutions will help create Pareto improvements in societies where capital markets are fragmented. Reduced waiting times to purchase large assets is one area where such improvement is reflected. In addition, the provision of social capital at the community level is positively correlated with ROSCA participation, thus improving welfare at the lowest level (Ademola Abimbola et al., 2020; Anderson et al., 2009). The related hypotheses posited are:

H3: ROSCA motives have a positive effect on entrepreneurial intention.

H4: ROSCA benefits have a positive effect on entrepreneurial intention.

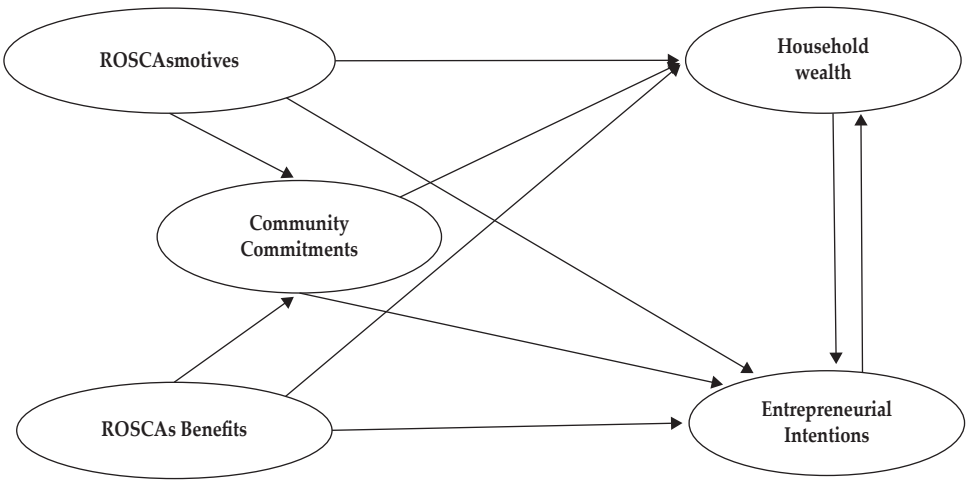
As social institutions, ROSCAs have been empirically proven to be able to function as tools in community development. Moreover, social problems on a small scale such as the family can also be significantly reduced. This is because the community has been proven to be able to provide positive input in terms of information and in a financial context (Anderson & Baland, 2002; Besley et al., 1993; Ibrahim, 2019; Mbizi & Gwangwava, 2013). Handa & Kirton (1999) obtained similar results, showing that the commitment of ROSCA members to pay contributions significantly increases the sustainability of the ROSCA, and that the contractual relationship between the chairperson and other ROSCA members aims to minimise transaction costs, which means more flexibility. Adams & Sahonero, (2015); Ambec & Treich, (2007) found significant participation of the Bolivian people in ROSCAs, even with rising inflation, they are very enthusiastic and show they are willing to save financially.. ROSCAs appear to offer members some of the main advantages that formal financial institutions do not. In line with this, the following hypotheses are proposed:

H5 : Community commitment mediates the relationship between ROSCA motives and household wealth.

H6 : Community commitment mediates the relationship between ROSCA motives and entrepreneurial intention.

H7 : Community commitment mediates the relationship between ROSCA benefits and household wealth.

H8 : Community commitment mediates the relationship between ROSCA benefits and entrepreneurial intention.



Source: (Ademola Abimbola et al., 2020; Ambec & Treich, 2007; Besley et al., 1994; Bisrat et al., 2012)

Figure 1.
Conceptual Framework

ROSCAs provide services through savings mobilisation among households, friends and relatives. Empirically, it has been pointed out by Kedir and Ibrahim (2011) and Calomiris & Rajaraman (1998) that individual participation in ROSCA has a positive impact on the participation of the middle class, including the self-employed, employees of private organizations, and SMEs coming from households. Furthermore, the success of the ROSCA cycle greatly affects the level of ability of members in the institution to pay contributions, so that operationally ROSCAs can remain as institutions able to mobilise social and financial relations (Bauchet & Larsen, 2018; Calomiris & Rajaraman 1998; Handa & Kirton, 1999).

ROSCA make a significant difference to the welfare of local communities, as measured by household socioeconomic changes such as increased income, level of knowledge, and attitude (Ademola Abimbola et al., 2020; Anderson et al., 2009). The insurance motive and the commitment of ROSCAs help foster good household habits to save and provide access to venture capital. In fact, Ademola Abimbola et al., (2020) state that the participation of ROSCAs can resolve social pressures and intra-household conflicts. Anderson and Baland (2002) developed an intra-household bargaining model, in which the wife loses full control over household expenses. However, she wanted to save money beyond her husband's control to buy durable goods, thus triggering the participation of the ROSCA in creating a decent household life. The associated hypotheses are:

H9 : Household wealth mediates the relationship between ROSCA motives and entrepreneurial intention.

H10 : Household wealth mediates the relationship between ROSCA benefits and entrepreneurial intention.

Table 3.
Research Indicators and Variables

No	Variable	Indicator	Symbol	Source
1	ROSCA Motives	Insurance	RM1	Ademola Abimbola et al. (2020); Mbizi and Gwangwava (2013)
		Purchase of Durable Goods	RM2	
		Social Pressure	RM3	
2	ROSCA Benefits	Strong Network	RB1	Ademola Abimbola et al. (2020); Mbizi and Gwangwava (2013)
		Business Information	RB2	
		Business Capital	RB3	
		Credit or Savings	RB4	
3	Community Commitment	Sense of Belonging	CM1	Garbarino and Johnson (1999); Hur et al. (2011)
		Exchange of Opinion	CM2	
		Information Gathering	CM3	
4	Household Wealth	Living Standards	HW1	Widyastuti et al. (2019)
		Consumption	HW2	
		Financial Stability	HW3	
		Tax Compliance	HW4	
5	Entrepreneurial Intention	Perceived Desirability	IE1	Thompson (2009); Kuckertz & Wagner (2010)
		Perceived Feasibility	IE2	
		Prosperity to Act	IE3	
		Perceived Support	IE4	
		Perceived Barriers	IE5	

IV. RESULTS AND ANALYSIS

4.1. Results

4.1.1. Normality and Multicollinearity

A normality test is an analysis conducted with the aim of assessing the distribution of research data in a group of data or variables. On the other hand, multicollinearity is a situation that shows a simultaneous correlation or relationship between variables in a regression model (Ferdinand, 2002). In this study, data normality was measured using the values of skewness and kurtosis (± 2.00), as recommended by George and Mallery (2010). Subsequently, the variance inflation factor (VIF) value was used as a measurement of the multicollinearity of the data (<10) according to the recommendations of Hair et al. (2010) and Hu and Bentler (1999). The output shown in Table 4 indicates that the skewness and kurtosis values are in the recommended range, while the VIF values are in the range of 2.093 to 2.705. It can thus be concluded that the study data were normally distributed.

Table 4.
Normality and Multicollinearity

Latent Variable	Manifest Variable	Loading Factors	Skewness Statistic	Std. Error	Kurtosis Statistic	Std. Error	Tolerance	VIF
ROSCA Motives	RM1	0.758***	-0.614	0.162	-0.046	0.323	0.478	2.093
	RM2	0.803***	-0.521	0.162	-0.231	0.323		
	RM3	0.899**	-0.752	0.162	0.001	0.323		
ROSCA Benefits	RB1	0.882**	-0.995	0.162	0.972	0.323	0.371	2.705
	RB2	0.667**	-0.615	0.162	-0.304	0.323		
	RB3	0.905***	-0.604	0.162	0.233	0.323		
	RB4	0.839***	-0.688	0.162	0.033	0.323		
Community Commitment	CM1	0.901***	-0.762	0.162	0.677	0.323	0.397	2.516
	CM2	0.913***	-0.830	0.162	0.989	0.323		
	CM3	0.911***	-0.680	0.162	0.286	0.323		
Household Wealth	HW1	0.837***	-0.749	0.162	0.217	0.323	0.469	2.132
	HW2	0.848***	-0.816	0.162	0.367	0.323		
	HW3	0.871***	-0.724	0.162	0.669	0.323		
	HW4	0.853***	-0.585	0.162	0.611	0.323		
Entrepreneurial Intention	IE1	0.768***	-0.554	0.162	0.262	0.323	-	-
	IE2	0.817**	-0.249	0.162	-0.542	0.323		
	IE3	0.772***	-0.687	0.162	-0.184	0.323		
	IE4	0.844**	-0.374	0.162	-0.527	0.323		
	IE5	0.822***	-0.702	0.162	0.421	0.323		

Notes: **significant at 0.01, ***significant at 0.001

4.1.2. Confirmatory Factor Analysis (CFA)

CFA is a form of factor analysis which aims to test whether the indicators that have been grouped based on their latent variables (their constructs) are consistent in their construct or not. In the CFA, the researchers tested whether the data fitted the model developed (Anwar et al., 2018; Jöreskog, 1969). Measurement model 1 (see Figure 2) was used to measure the level of reliability and validity of the research latent variables (discriminant and convergent validity). The output shown in Table 4) indicates that the majority of the loading factors had high convergent validity (estimate> 0.70 and a significant probability at 0.001), as recommended by Hair et al. (2010) and Hu and Bentler (1999).

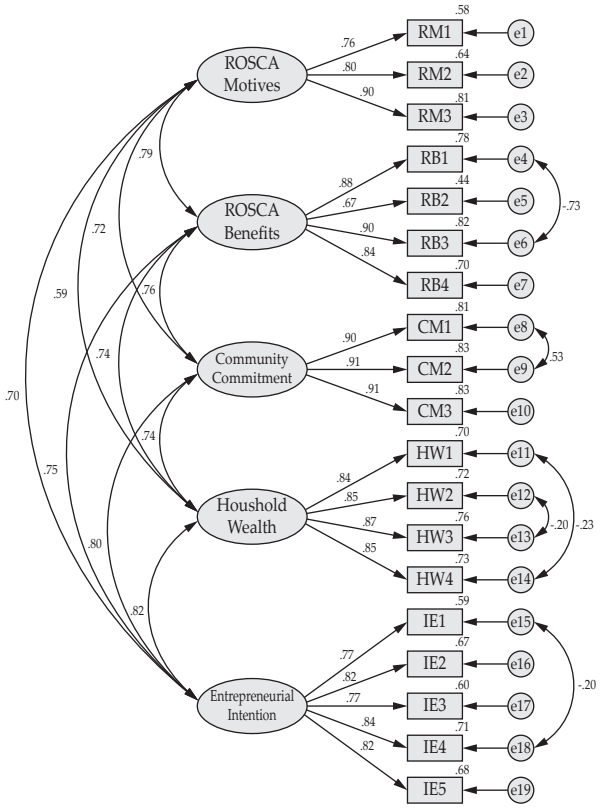


Figure 2.
Measurement of CFA

The validity of the measurement research variables was assessed using the average variance extracted (AVE> 0.50) values and the square root of AVE (> 0.70), as recommended by Hu and Bentler (1999) and Hair et al. (2010). In addition, the measurement reliability of the research variables was extracted using the value of the composite reliability and Cronbach's alpha (CR> 0.70 and CA> 0.70), in nline with the recommendations of Hair et al. (2010) and Nunnally & Bernstein (1994). The output data processing (see Table 5) shows that the AVE value is in the range of 0.648 to 0.825 and the square root AVE value is in the range 0.805 to 0.908. The CR value is in the range 0.862 to 0.934 and the CA value is in the range 0.861 to 0.946. It can therefore be concluded that all the research instrument variables used are valid and reliable.

Table 5.
Reliability and Validity Test

Latent Variable	Construct Reliability			Construct Validity				
	CR	CA	Result	AVE	MSV	Square Root AVE	Corrected Item Total Correlation	Result
Community Commitment	0.934	0.946	Reliable	0.825	0.640	0.908	0.890	Valid
ROSCA Motives	0.862	0.861	Reliable	0.676	0.621	0.822	0.737	Valid
ROSCA Benefits	0.896	0.881	Reliable	0.686	0.621	0.829	0.747	Valid
Household Wealth	0.914	0.906	Reliable	0.726	0.676	0.852	0.788	Valid
Entrepreneurial Intention	0.902	0.896	Reliable	0.648	0.676	0.805	0.748	Valid

4.1.3. Structural Model

The next analysis was a measure of the structural model. The study used the bootstrap 2,000 approach (resampling) bias-corrected confidence interval with p-value for a two-tailed significance (* p: 0.05, ** p: 0.01, *** p: 0.001) (Efron & Tibhsirani, 1993). The bootstrap approach can estimate errors based on re-sampling from the analysed sample. Its idea is that the sub-sample (bootstrap output) of the analysed sample (the research sample) is correlated with the sample in the study in a similar process as the analysed sample being correlated with the population (Cameron & Trivedi, 2010).

Structural model 1 was used to measure how much influence ROSCAs have in terms of benefits and motives on household wealth variables (see Figure 3). Model 1 analysis shows the fit output model: x^2/df = 2.468, GFI = 0.929, AGFI = 0.880, CFI = 0.968, TLI = 0.955, RMSEA = 0.074, Chi-Square = 96.23, DF = 39. Parameters generated in such an analysis can be evaluated to establish if they are within the recommended limits (Bentler, 1990; Hair et al., 2010; Tanaka, 1993). The regression output (see Table 8) shows that ROSCA motives have a negative effect on household wealth (β = 0.056, C.R = 0.691, and p = 0.489). In contrast, ROSCA benefits have a significant positive effect on household wealth (β = 0.660, C.R = 6.453, and p = 0.001). The R^2 value is 0.54, which indicates that networking explains 54 percent of variation in the household wealth variable.

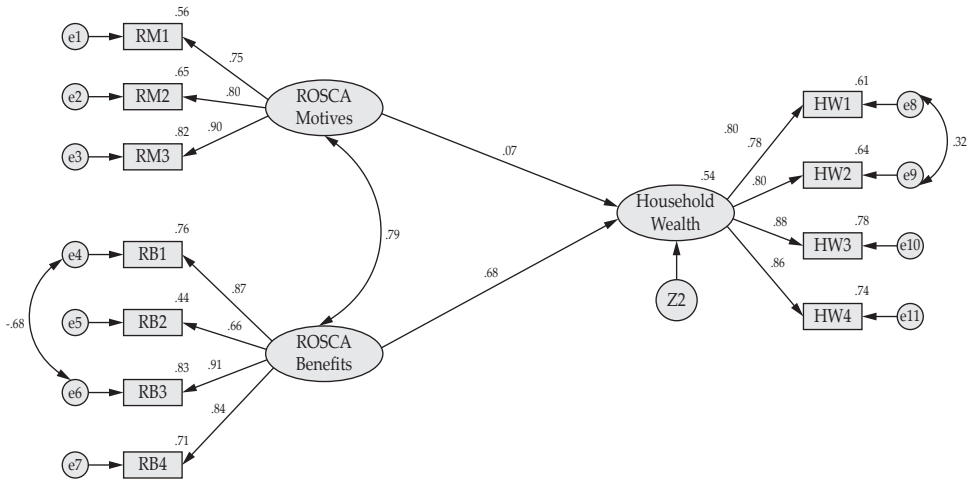


Figure 3.
Measurement Model 1

Structural model 2 was used to measure how much influence in terms of benefits and motives ROSCAs have on the entrepreneurial intention variables (see Figure 4). Model 2 analysis shows the fit output model: x^2/df = 2.692, GFI = 0.913, AGFI = 0.862, CFI = 0.956, TLI = 0.940, RMSEA = 0.079, Chi-Square = 131.88, DF = 139. The parameters generated in such an analysis can be evaluated to establish if they are within the recommended limits (Bentler, 1990; Tanaka, 1993; Hair *et al.*, 2010). The regression output shows that ROSCA motives have a significantly positive effect on entrepreneurial intention (β = 0.232, C.R = 2.883, and p = 0.004). In line with these results, the ROSCA benefits have a significant positive effect on entrepreneurial intention (β = 0.504, C.R = 5,381, and p = 0.001). The R^2 value is 0.59, which indicates that networking explains 59 percent of variation in the entrepreneurial intention variable.

The full structural model (see Figure 5) was used to measure how much influence the factors have in the presence of the mediating variable. The fit model output (see Table 6) shows x^2/df = 2.692, GFI = 0.913, AGFI = 0.862, CFI = 0.956, TLI = 0.940, RMSEA = 0.079, Chi-Square = 131.88, DF = 139. Parameters generated in such an analysis can be evaluated to determine if they within the recommended limits (Bentler, 1990; Tanaka, 1993; Hair et al., 2010). They first measure the relationship between ROSCA motives and household wealth (through community commitment). The regression output shows the value of the indirect effect of ROSCA motives on household wealth is significant (β = 0.122, and p = < 0.05), while the direct effect value of ROSCA motives on household wealth has insignificant values (β = -0.081, and p = > 0.05). This shows that community commitment fully mediates the relationship between ROSCA motives and household wealth. This was followed by the second measurement of the variable ROSCA motives and entrepreneurial intention (through community commitment). The regression output shows that the value of the indirect effect of ROSCA motives on entrepreneurial intention is significant (β = 0.081, and p = < 0.05), while the direct effect value of ROSCA

motives on entrepreneurial intention has insignificant values (β = 0.149, and p = > 0.05). This shows that community commitment fully mediates the relationship between ROSCA motives and entrepreneurial intention.

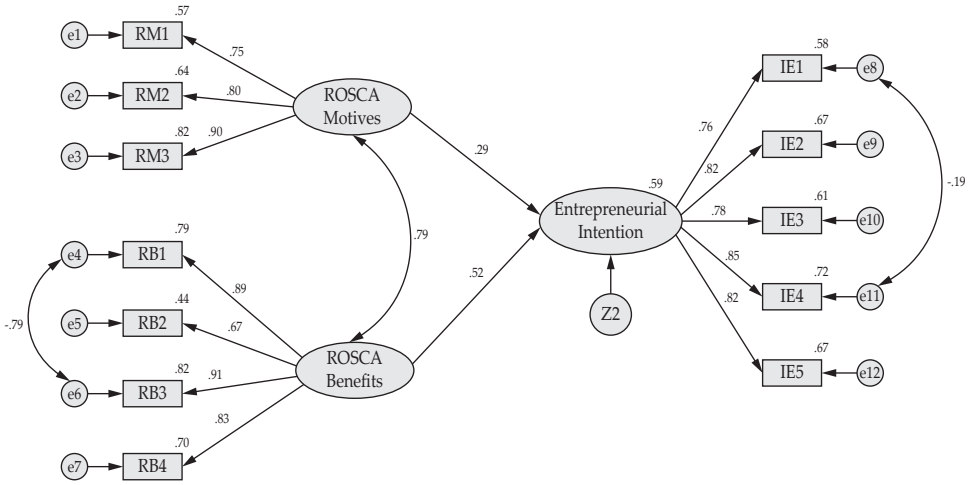


Figure 4.
Measurement Model 2

In the third measure, the regression output shows that the value of the indirect effect of ROSCA benefits on household wealth through community commitment is significant (β = 0.235, and p = < 0.05), while the direct effect value of ROSCA motives on household wealth also has a significant value (β = 0.481, and p = < 0.05). This indicates that community commitment partially mediates the relationship between ROSCA benefits and household wealth. Furthermore, in the fourth measurement, the regression output shows that the value of the indirect effect of ROSCA benefits on entrepreneurial intention through community commitment is significant (β = 0.155, and p = < 0.05), while the direct effect value of ROSCA benefits on entrepreneurial intention has insignificant values (β = 0.046, and p = > 0.05). This shows that community commitment fully mediates the relationship between ROSCA benefits and entrepreneurial intention.

The fifth measurement show that The regression output of the indirect effect of ROSCA motives on entrepreneurial intention through household wealth is insignificant (β = -0.029, and p = > 0.05), while the value of the direct effect of ROSCA motives on entrepreneurial intention also has insignificant values (β = 0.149, and p = > 0.05). This indicates that household wealth does not mediate the relationship between ROSCA motives and household wealth. Furthermore, the sixth measurement shows that the value of the indirect effect of ROSCA benefits on entrepreneurial intention through household wealth is significant (β = 0.209, and p = < 0.05), while the direct effect value of ROSCA benefits on entrepreneurial intention has insignificant values (β = 0.046, and p > 0.05). This means that household wealth fully mediates the relationship between ROSCA benefits and entrepreneurial intention.

4.2. Analysis

Based on the research results, the majority of the hypotheses have been accepted. These results support those of previous studies, which confirm that one household financial allocation is for savings or investment (Anderson & Baland, 2002). People in the grassroots group often feel hesitant to save with formal financial institutions. In addition, difficult access, lack of information and the presence of retail formal financial institutions make it difficult for households to save or invest. To overcome this, ROSCAs have become an alternative in the community for savings and loans (Anderson et al., 2009; Kharisma et al., 2020). The instrument can accommodate or replace formal financial institutions even though it uses a very simple method, especially as an Islamic social finance instrument. If ROSCAs can be managed properly and use Islamic principles, they will be able to provide savings and loan facilities to improve household economies. In addition, ROSCAs also function to provide loans of relatively small amounts that can be used as tactical funds to meet unexpected needs (Ademola Abimbola et al., 2020; Anderson et al., 2009).

Table 6.
Model Fit Results

Fit Criteria	x^2	df	x^2/df	GFI	AGFI	CFI	TLI	NFI	RMR	RMSEA
CFA	319.71	137	2.334	0.871	0.821	0.950	0.938	0.917	0.042	0.077
Model 1	96.23	39	2.468	0.929	0.880	0.968	0.955	0.947	0.041	0.074
Model 2	131.88	49	2.692	0.913	0.862	0.956	0.940	0.932	0.048	0.079
Full Model	329.96	139	2.374	0.865	0.815	0.948	0.936	0.914	0.042	0.078
Fit Range	-	-	1-3	> 0.90	> 0.80	> 0.90	> 0.90	> 0.90	< 0.09	< 0.08

Table 7.
Indirect Effect Results

Latent Variable					Direct Effect	*p*	Indirect Effect	*p*
Household Wealth	<---	Community Commitment	<---	ROSCA Motives	-0.081	0.421	0.122	0.014
Entrepreneurial Intention	<---	Community Commitment	<---	ROSCA Motives	0.149	0.188	0.081	0.011
Household Wealth	<---	Community Commitment	<---	ROSCA Benefits	0.481	0.001	0.235	0.002
Entrepreneurial Intention	<---	Community Commitment	<---	ROSCA Benefits	0.046	0.529	0.155	0.003
Entrepreneurial Intention	<---	Household Wealth	<---	ROSCA Motives	0.149	0.188	-0.029	0.374
Entrepreneurial Intention	<---	Household Wealth	<---	ROSCA Benefits	0.046	0.529	0.209	0.001

Table 8.
Direct Effect Results

Latent Variable			Estimate	S.E.	C.R	*p*
Household Wealth	<---	ROSCA Motives	0.056	0.081	0.691	0.489
Household Wealth	<---	ROSCA Benefit	0.661	0.102	6.453	***
Entrepreneurial Intention	<---	ROSCA Motives	0.232	0.08	2.883	0.004
Entrepreneurial Intention	<---	ROSCA Benefit	0.504	0.094	5.381	***

Source: Data processed, 2020

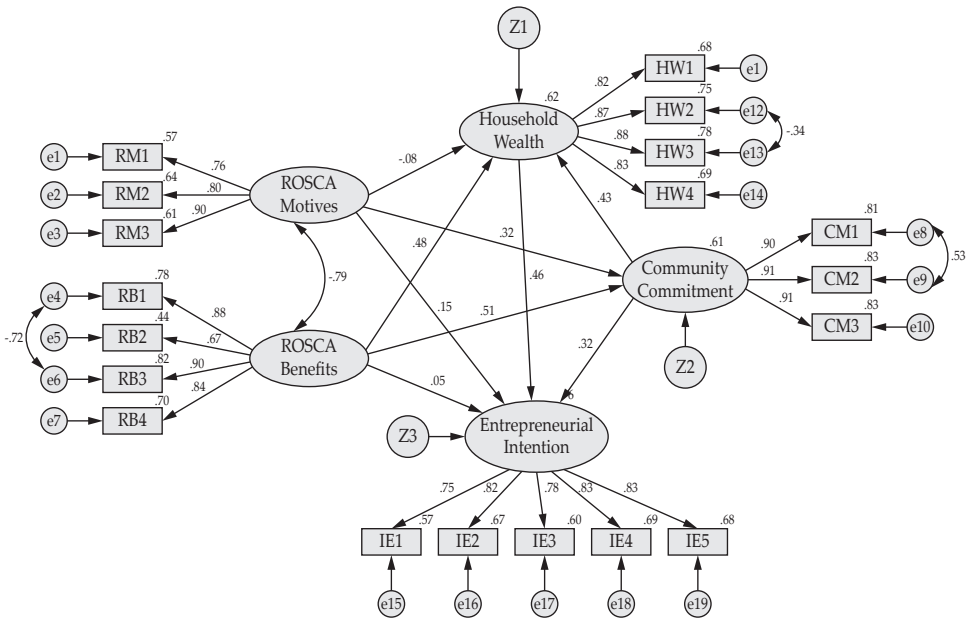


Figure 5.
Measurement Full Model

Based on the research results, it has been demonstrated that ROSCAs can provide capital for household businesses with the direct influence of the motives and benefits of their participation on entrepreneurial intentions (Bisrat et al., 2012; Mbizi & Gwangwava, 2013). Handa and Kirton (1999) cobtained similar results, which showed that the commitment of the ROSCA chairperson to pay contributions significantly increases the sustainability of ROSCAs, and that the contractual relationship between the chairperson and other ROSCA members was intended to minimise transaction costs, meaning more flexibility. Ambec & Treich (2007) and Adam & Sahonero (2015) in their research find deep participation of Bolivian society towards ROSCAs. This shows that Bolivian people are eager and willing to save in financial form, even when inflation is almost swelling. Formal financial institutions do not appear to offer members main advantages, but ROSCAs do.

V. CONCLUSION AND RECOMMENDATIONS

5.1. Conclusion

The statistical results of the study lead to the conclusion that ROSCA motives and benefits have a direct effect on entrepreneurial intention. Furthermore, ROSCA benefits directly affect household wealth. This raises the argument about the importance of ROSCA participation in fostering entrepreneurial intention. In addition, community commitment has succeeded in mediating the relationship between ROSCA motives and benefits and their effect on entrepreneurial intention and household wealth. There are many opinions in previous research on whether ROSCAs have a positive impact on people's social finance. Apart from receiving social benefits such as exchanging information about business (e.g., product trends, market share, and knowledge related to small-scale business operations), people who participate in ROSCAs also enjoy financial benefits, such as the availability of capital and investment facilities to meet community needs, although there is no strong evidence to significantly link this to SME performance. In this paper, it is also concluded that ROSCAs can be an instrument of Islamic social finance, because their characteristics are not strenuous to members. They involve the principle of mutual cooperation, and are not affected by interest rates or inflation.

5.2. Recommendations

Practice: The research findings could be used as a frame of reference for how Islamic banking practitioners can make use of associations in the Islamic community. Islamic banking can act as a facilitator for regularly-held group meetings (ROSCAs), and when processing the payment of contributions. The proceeds can be used in the bank transfer payment. Banks can also provide training, counselling, or use the network of associations in ROSCAs to develop their market databases. A closer relationship between formal and non-formal institutions could lead to vibrant economic activities, such as building credit lines for small businesses, especially in the home industry sector.

Financial authorities: The research findings could be used as an empirical reference for the authorities to develop community-based small economies. A possible focus could be on small community-based financial instruments, using community vehicles, so that effective channels can be maximised. The community channel makes it easy to maximize the effectiveness of the distribution of funding and favors the lower middle class and small businesses. Thus, policies are needed to ensure capital for small and medium enterprises involved by business community.

Future research: The research findings could be used as a basis for researchers to build the concept of ROSCAs from an Islamic perspective. Researchers could focus on how the dimensions and measurement scales of ROSCAs could be from an Islamic perspective, as well as how the process is discussed in a comprehensive manner in accordance with Islamic principles. The development of further research models is highly recommended to enrich the repertoire of ROSCAs, ones that focuses on how ROSCAs as non-formal institutions can become a medium for economic development in the household sector.

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APPENDIX

Questionnaire Statement

No	Variable	Questionnaire Statement	Symbol	Source
1	ROSCAs Motives	I feel my finances are safe when participating in ROSCAs	RM1	Abimbola et al. (2020); Mbizi and Gwangwava (2013)
		I can afford secondary needs by joining ROSCAs	RM2	
		I participated in ROSCAs due to a conflict	RM3	
2	ROSCAs Benefit	I made a lot of friends when I participated in ROSCAs	RB1	Abimbola et al. (2020); Mbizi and Gwangwava (2013)
		I get information about Islamic business by joining ROSCAs	RB2	
		Participating in ROSCAs, I get capital to start or grow a business	RB3	
		Participating in ROSCAs, I get a usury-free loan and also as savings for future periods	RB4	
3	Community Commitment	I feel a sense of belonging from my community of ROSCAs	CM1	Garbarino and Johnson (1999); Hur et al. (2011)
		I exchange information and opinions with my ROSCA members	CM2	
		I will collect any useful information through my ROSCA community	CM3	
4	Household Wealth	My standard of living is quite prosperous	HW1	Widyastuti et al. (2019)
		The primary needs in my life can be met	HW2	
		My financial condition is quite stable	HW3	
		I am always on time in paying taxes	HW4	
5	Entrepreneurial Intention	I want a career as an Islamic entrepreneur	IE1	Thompson (2009); Kuckertz & Wagner (2010)
		I see an opportunity to start my own Islamic business	IE2	
		I feel able to start my own Islamic business	IE3	
		If I see a business opportunity, I will take action	IE4	
		If I see a business opportunity, I'm excited to follow it up	IE5	

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