

Entrepreneurial and business skills in relation to loan repayment rates of Microfinance clients in Ghana.

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Abstract:

Entrepreneurial and business skills are generally considered key to microbusiness success, and, therefore, to Microfinance Institution (MFI) clients' loan repayment. However, empirical evidence is largely lacking, and where present, does not confirm the importance of these skills for microfinance success. The present paper uses objective MFI repayment data to empirically test whether repayment rates positively correlate with self-evaluations on entrepreneurial and business skills. A survey was conducted among 235 loan clients of uniCredit, an MFI in Ghana. We establish that MFI clients' self-evaluation of their entrepreneurial and business skills are not related to their loan repayment rates. We observe that women repay their loans better than do male microbusiness entrepreneurs, and loan repayment was also better for those entrepreneurs with more than 15 years of business experience.

Key words: entrepreneur, microfinance, skills, business, loan, client.

1 Introduction

The relevance of entrepreneurial and business skills for microbusiness entrepreneurs are widely recognized (Baron & Ensley, 2006; Seuneke et al., 2013; Yunus, 1999). According to the human capital theory, those entrepreneurs who possess greater levels of skills are expected to perform better (Becker, 1993; Kraiger et al., 1993; Ployhart & Moliterno, 2011). The literature remains unclear as to which skills really matter for business performance. For example, Mano et al. (2012) argue that planning and market orientation skills are key to business performance, whereas Edgcomb (2002) considers record keeping and break even analysis as most important. However, Karlan & Valdivia (2011) and McKenzie & Woodruff (2013) empirically examined the impact of microfinance training programmes and established that these training programmes fail to improve business performance.

The objective of the present study is to empirically test the findings of Karlan & Valdivia (2011) and McKenzie & Woodruff (2013), by relating self-evaluation of entrepreneurial and business skills of Micro Finance Institution (MFI) clients to objective loan repayment data. We analyse 235 Ghana MFI micro clients credit records and examine whether loan repayment probabilities improve for those microbusiness entrepreneurs that claim to have entrepreneurial and business skills. Section 2 discusses the literature on allegedly important entrepreneurial and business skills. Section 3 presents the methods and data. Section 4 elaborates on the results, Section 5 concludes.

2 Theory

Causes of non-repayment

Most MFI's in developing countries suffer from non-repayments of loans (Field & Pande, 2008; Mader, 2013). The sustainability and profitability of MFI's depend on loan repayments. In 2013, over 30 Ghana MFI's collapsed and most of the depositors were not refunded their savings (Monitor, 2013). This aggravates the poverty among MFI's depositors and microbusiness entrepreneurs (Bastiaensen et al., 2013; Mulugetta, 2010). To improve loan repayment rates, most MFI's apply the 5C's criteria, i.e., collateral, credit history, character of client, capacity to pay back and cash flow of client to assess their loan clients' eligibility and probability to pay their loans (Chen et al., 2009). Notwithstanding these loan application criteria, many MFI loan clients default on their loans, thereby jeopardizing the value of the MFI's loan portfolio (Armendariz & Morduch, 2010; Gutierrez-Nieto et al., 2007; Ledgerwood, 1999; Ntiamoah et al., 2014).

Several factors affect loan repayment rates. Balogun & Alimi (1988) and Ledgerwood (1999) establish that loan default is due to small loan size and poor loan monitoring. Sharma & Zeller (1997) argue that default is due to lack of willingness among clients to pay and inadequate loan application reviews by loan officers. Olomola (2000) finds that high interest rates and delay in loan delivery increase loan default rates. According to Bloem & Goerter (2001), loan default is caused by poor business decisions by the borrower and unanticipated price changes of merchandise. Kohansal & Mansoori (2009) argue that loan default is due to high minimum interest rates imposed by the government, monopoly power in the credit market, transaction costs incurred by borrowers in applying for loans and inability of the loan officers to effectively monitor the performance of their clients. Mensah et al. (2013) observe a negative relation between loan repayment on the one hand, and interest rates, moral hazard and over-borrowing on the other. The lower the interest rates, the fewer loan clients divert loans into new ventures. Loan diversion is a major cause of loan defaults (Bichanga et al., 2013). Bichanga et al. (2013) also identify non-supervision of borrowers and lagging macro-economic growth rates as causes of loan default. More generally, in the absence of entrepreneurial skills one cannot expect the microbusiness entrepreneurs to successfully alleviate their poverty (Karlan & Valdivia, 2011) and repay their loans (Ekpe et al. (2010); Karnani, 2007; Mutisya & Yarime, 2014).

Entrepreneurship training programmes and loan repayment rates

The human capital theory asserts that education, work experience, upbringing by entrepreneurial parents and life experience add to successful entrepreneurship (Martin et al., 2013). Based on this theory, Becker (1993), Kraiger et al. (1993) and Ployhart & Moliterno (2011) postulate that individuals or groups who possess greater levels of experience, knowledge and skills perform better in executing relevant tasks. Pittaway & Cope (2007) and Seuneke et al. (2013) observe positive effects of training on entrepreneurial success. Training programmes which may include vocational training, field training, advisory services and other

business development services help strengthen the efficiency of the informal sector and substantially improve earnings (Alby et al., 2011; Edgcomb, 2002; Ekpe et al., 2011; Karlan & Valdivia, 2011; Karnani, 2007; Ployhart & Moliterno, 2011). Echtner (1995) concludes that entrepreneurship training programs are the most cost effective means of empowering local individuals. Bichanga & Aseyo (2013) establish that loan clients who participate in formal and informal training programmes improve on their business performances and may pay their loans better. Elaine & Barton (1998) state that the provision of formal and informal training programmes not only improves the ability of borrowers to pay their loans but also makes the relationship of the clients with the MFI more sustainable. Block & Wagner (2010) argue that microbusiness entrepreneurs need vocational and hands-on informal training tailored to the individual entrepreneur, rather than standardized training curricula. Lensink et al. (2011) observe that the combination of both informal and formal business development services and training programmes is most effective for microbusiness performance. Godquin (2004) concludes that provision of non-financial services such as primary health provisions, basic literacy, marketing information and occupational training positively affect business performance.

Although the relevance of entrepreneurial and business skills is widely recognized, the literature fails to provide empirical evidence on the effect of training programmes on business performance. Karlan & Valdivia (2011) do not find any effect of training programmes participation on key outcomes such as business revenue, profits, or employment and conclude that training programmes may improve the marginal ability of only few participants. McKenzie & Woodruff (2013) compare micro finance training programmes and establish that in many cases the impact of training programmes on business practices is small and do not affect sales or profitability. More generally, Yunus (1999) argues that entrepreneurial skills are innate and therefore cannot be trained.

As suggested by Martin et al. (2013), the ambiguity on the effectiveness of entrepreneurship programmes can be explained by the research design of relevant studies. Many studies fail to incorporate both pre and post entrepreneurial training intervention measures. This leaves the results of most studies unreliable. More generally, the established positive effects of training on business success among opportunity entrepreneurs in developed countries may not hold for necessity entrepreneurs in developing countries (Pittaway & Cope, 2007; Seuneke et al., 2013).

3 Methods

Research design

The present paper empirically examines the relation between entrepreneurial and business skills among MFI microbusiness entrepreneurs and loan repayment probabilities. As to entrepreneurial skills, we distinguish between customer relations, risk tolerance, the entrepreneurs' attitude towards innovativeness, pro-activeness and interpersonal relations. As

to business skills, we distinguish between skills related to general business planning, record keeping, financial management and market orientation, see Figure 1.

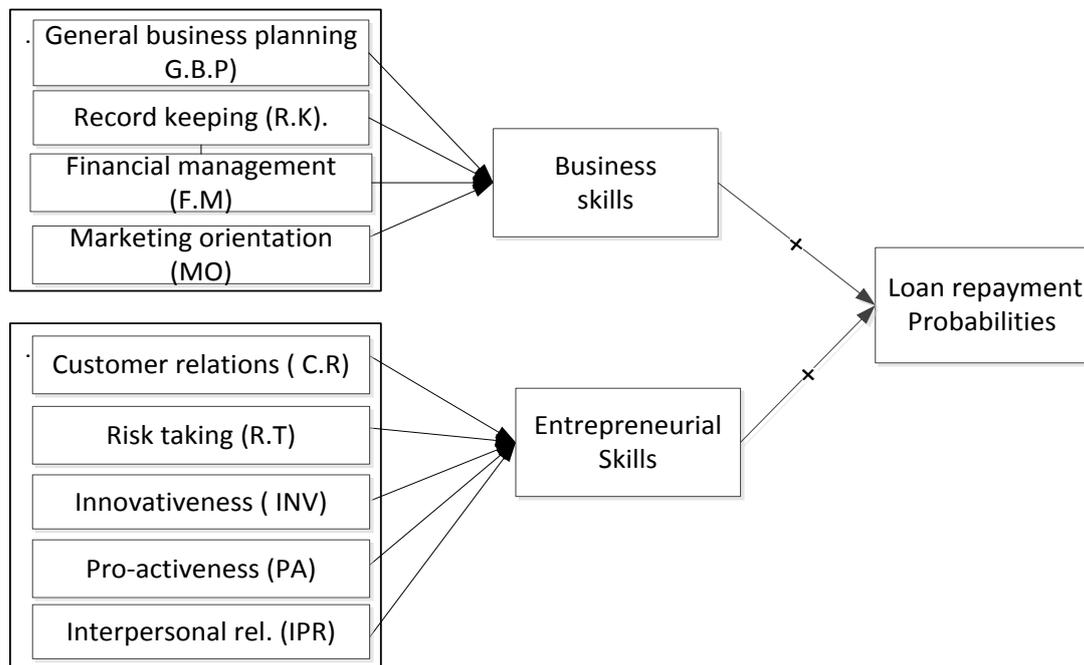


Figure 1. Business skills, Entrepreneurial skills and loan repayment probability

Data

The study site for this research is the Ghanaian MFI uniCredit Ghana Limited. The primary focus of uniCredit is to provide financial services that are specifically tailored towards the needs of micro clients, and small and medium scale enterprises. The mission of uniCredit is to develop easily accessible financial products and be the most effective and efficient MFI in Ghana. As of 2011, uniCredit had twelve branches, with an institutional deposit of USD 39 million deposited by 71 thousand customers and loans portfolio of USD 24 million with 3,5 thousand loan clients (Mix-Market, 2015). The loans portfolio is categorized into three main sectors. The first sector is the corporate loans sector with company loans above USD 50 thousand. It accrues to 30 percent of the total uniCredit loans portfolio, and shows repayment rates above 85 percent. The second sector is the business loans sector with loans ranging from USD 4 thousand to USD 50 thousand. This sector equals 38 percent of the loans portfolio and shows a 77 percent repayment rate. The third sector is the micro loan sector with loans below USD 4,000. This sector constitutes 32 percent of uniCredit's loans portfolio of loans and shows a 50 percent repayment rate. Good loan repayment is defined as full repayment of principal and interest before due date, on due date, or seven days past due date. The overall institutional loan repayment rate as of 2013 was 71 percent. Our study sites are three branches of uniCredit Ghana. These are Ashaiman, Makola and Kantamanto, located in Accra, the capital of Ghana. Ashaiman is an emerging branch, is densely populated and primarily consists of petty traders. Makola is geographically close to Kantamanto and both are cosmopolitan communities. Makola is characterized by modern shops for new clothing and

clothing accessories. By contrast, Kantamanto stands out for its market for second hand clothing, shoes and building materials. These three branches were singled out as research sites because these constitute the hub of micro finance in Accra.

In order to measure the entrepreneurial and business skills deemed relevant for loan repayment probabilities, questionnaires were filled out by uniCredit loan clients (see Appendix A). For the three branches, the entire loan list was downloaded and loan clients with loan disbursements above USD 4,000 were excluded as these loan clients cannot be considered micro loan clients. Staff loans and salary workers loans were also excluded. From the micro loan clients loan portfolio, 235 were randomly selected from the total data on 3,277 uniCredit clients and included in the survey. Loan officers then invited the selected clients to the uniCredit sites to complete the questionnaires.

Descriptives

The age of the respondents varies from 20 years to above 50 years, with the majority (52 percent) above 40 years. Using cluster analysis we categorised the age groups into two categories, i.e. less than and above 40 years.

The respondent business experience varies from less than 5 years to above 20 years, with the majority (75 percent) having fewer than 15 years of experience. Becker (1993), Gird & Bagraim (2008), Kraiger et al. (1993) and Ployhart & Moliterno (2011) argue that experience with entrepreneurship adds to the ability to successfully execute business operations. More generally, life experience adds to successful entrepreneurship as well (Martin et al., 2013). Based on cluster analysis, we distinguish those loan clients with less than 15 years of business experience from those with more than 15 years of business experience.

The education level of the respondents varies from primary through secondary and tertiary education. The majority are those with primary and secondary education, and these respondents represent 89 percent of the total sample. We therefore categorised the respondents in two clusters, i.e. those with primary and secondary education and those with tertiary degrees.

The total sample of 235 counts 102 males and 132 females and comprises the Ashaiman branch (79 respondents), the Makola branch (77 respondents) and the Kantamanto branch (79 respondents).

Table 1. Descriptives

Age of loan client	Frequency	Percentage
< 40 years	110	47%
≥ 40 years	121	52%
Years of business experience		
< 15 years	176	75%
≥ 15 years	59	25%
Level of education		
Primary & Secondary degree	208	89%
Tertiary degree	27	12%
Gender		
Male	102	43%
Female	132	57%

Using seven point Likert scales several constructs relevant for loan repayment were designed. According to (Verhees et al. (2012) and Wiklund et al. (2009), entrepreneurial skills include the willingness to take risk, innovativeness and pro-activeness. Risk taking (RT) is therefore measured by questions on making decisions under uncertainty, taking responsibility for ideas and decisions, and working under pressure (Chen et al., 1998; Oosterbeek et al., 2010; Verhees et al., 2012). Innovativeness (INV) is measured by questions on new venturing and new business, new product and services, identifying new markets and geographical territories, and identifying new methods of production (Chen et al., 1998; Verhees et al., 2012). The clients' pro-activeness (PRO) is measured by questions on their willingness to start a new activity, to be the first to respond to new opportunities, and the clients' proficiency with starting new activities (Verhees et al., 2012). Smith & Perks (2006) and Van Dyk et al. (1992) emphasize the need to maintain customer relations and interpersonal relations. We measure customer relations (CR) with questions on customers interaction, understanding customer needs and perception of customers. Questions on handling employees and employee procedures measure the loan clients' interpersonal relations (IPR).

According to Smith & Perks (2006), business skills enable the MFI loan clients to perform better. These skills include general business planning, record keeping, financial management and market orientation skills. General business planning skills (GBP) are measured by questions on short term planning, budgeting, and handling security (Smith & Perks, 2006; Van Dyk et al., 1992). Record keeping (RK) is measured by questions on book keeping, inventory control and filling (Edgcomb, 2002; Karlan & Valdivia, 2011; Mano et al., 2012; Van Dyk et al., 1992). Financial management skills are measured by questions on sources of finance, paying self-fixed salary and the ability to design the income statement (Edgcomb, 2002; Karlan & Valdivia, 2011; Mano et al., 2012; Smith & Perks, 2006). Market orientation skills (MO) are measured by questions on business expansion, the ability to conduct market analysis, how to compete on the product market, and questions on setting sales, profit and market share goals (Alby et al., 2011; Chen et al., 1998; Edgcomb, 2002; Oosterbeek et al., 2010; Otero-Neira et al., 2013; Verhees et al., 2012).

The mean scores for the uniCredit clients on the various dimensions of business and entrepreneurial skills vary from 4.20 to 5.82 on a 1 to 7 Likert scale, see Table 2. The high mean score on customer relations (CR) is an indication that the entrepreneurs consider customer relations skills as key to their business success. The lower mean of 4.2 for record keeping (RK) suggests that MFI loan clients do not consider this an important skill. The standard deviations are fairly low, suggesting that the scores on the various dimensions of business and entrepreneurial skills are closely clustered around their means. The mean values therefore adequately represent the sample scores. Correlation analysis, see Table 2, shows 36 bivariate correlations, all positive. All correlations were statistically significant at $p < 0.01$, except the correlation between customer relation (CR) and general business planning (GBP), record keeping (RK) and market orientation skills (MO).

Table 2. Mean, Standard Deviation and Correlation of variables for uniCredit Ghana.

	N	Mean	S D	GBP	RK	FM	MO	CR	RT	INV	PA	IPR
General business planning (GBP) (1-7 Likert scale)	235	4.80	1.14									
Record keeping (RK) (1-7 Likert scale)	235	4.20	1.38	.584*								
Financial management (1-7 Likert scale)	235	4.68	1.02	.523*	.539*							
Market orientation (MO) (1-7 Likert scale)	229	4.36	1.06	.489*	.520*	.492*						
Customer Relations (CR) (1-7 Likert scale)	235	5.82	0.97	.010	.005	.276*	.077					
Risk taking (RT) (1-7 Likert scale)	234	4.78	1.00	.222*	.223*	.275*	.214*	.304*				
Innovativeness (INV) (1-7 Likert scale)	232	4.43	1.14	.357*	.386*	.358*	.466*	.181*	.420*			
Pro-activeness (PA) (1-7 Likert scale)	232	4.63	1.04	.497*	.464*	.462*	.616*	.177*	.376*	.544*		
Interpersonal relationships (IPR) (1-7 Likert scale)	228	4.72	1.17	.301*	.387*	.338*	.403*	.241*	.304*	.330*	.452*	

*Significant at $p < 0.01$

4 Results

As to the relation between the age of clients and the probability to pay their loans, see Table 3, it shows that entrepreneurs above 40 years of age are more likely to pay their loans (48 percent repayment rate) relative to loan clients younger than 40 years (40 percent repayment rate). These repayment rates do not differ statistically significantly (p-value = 0.227).

Experience with entrepreneurship proves explanatory for the probability to pay the loan, see Table 3. Mean repayment values vary from 38 percent for the less experienced to 66 percent for the more experienced MFI loan clients. This mean difference between the less and more experienced is statistically significant (p-value = 0.001).

As to education and loan repayment, Table 3 shows that clients with primary or secondary education are more likely to pay their loans relative to those with tertiary education only (47 and 30 percent repayment rate, respectively). These repayment rates are statistically significantly different (p-value = 0.095).

The relation between gender and loan repayment was established, see Table 3. the highest mean (69 percent) was observed for female clients, which is an indication that females pay loans better than do male clients. These repayment rates differ statistically significantly (p-value = 0.001).

Table 3. Mean loan repayment rates for age of loan client, business experience, level of education and gender.

Age of loan client	N	Mean loan repayment rate	Std. Deviation	P-value
<40 years	110	40%	49%	0.227
≥40 years	121	48%	50%	
Years of business experience				
<15 years	176	38%	49%	0.000
≥15 years	59	66%	48%	
Level of education				
Primary or Secondary degree	208	47%	50%	0.095
Tertiary degree	27	30%	47%	
Gender				
Male	102	14%	35%	0.000
Female	132	69%	46%	

The variables RT, INV, PA, CR and IPR are clustered in the entrepreneurial skills test score; the scores on GBP, RK, FM and MO are summarized by the business skills test score. Cronbach's alpha values for the entrepreneurial and business skills test scores are 0.73 and 0.84, respectively. These values are within the acceptance range (Field, 2009; Hutcheson & Sofroniou, 1999).

Table 4 provides binary regression results, taking into account the differences and characteristics of the three branches Ashaiman, Makola and Kantamanto. Neither entrepreneurial nor business skills prove explanatory for loan repayment rates (p-value = 0.923 and 0.689, respectively). Age is not significantly related to loan repayment probabilities (p-value = 0.708). Loan repayment rates improve with years of experience (p-value = 0.001). Those microbusiness entrepreneurs with tertiary education level do not pay their loans better than those loan clients with primary or secondary degrees only (p-value = 0.902). Female MFI loan clients pay their loans better (p-value = 0.001). The model explains 41.8 percent of total variance in repayment rates.

Table 4. Binary regression analysis of loan repayment probabilities for uniCredit Ghana, fixed effects.

<i>Dependent variable: loan repayment rate</i>			
<i>N=225</i>	<i>coefficient</i>	<i>S.E.</i>	<i>p-value</i>
<i>Entrepreneurial skills</i>	-0.03	0.28	0.923
<i>Business skills</i>	0.08	0.19	0.689
<i>Age of loan client: ≥ 40 years</i>	-0.22	0.59	0.708
<i>Business experience: ≥15 years</i>	1.29	0.39	0.001*
<i>Level of education: tertiary degree</i>	-0.07	0.59	0.902
<i>Gender: female</i>	2.58	0.38	0.000*
<i>Constant</i>	-1.83	2.19	0.404

*Significant at p<0.01

5 Concluding remarks

The present study shows that those microbusiness entrepreneurs that consider themselves endowed with entrepreneurial and business skills, i.e., those that stand out on risk taking, innovativeness, pro activeness, customer relations, interpersonal relations, general business planning, record keeping, financial management and market orientation do not repay loans better than those who consider themselves not endowed with these skills. This suggest that entrepreneurship and business skills training programmes may not be expected to efficiently improve business performance and, therefore, Micro Finance Institution (MFI) loan repayment rates. This result is consistent with Karlan & Valdivia's (2011) and McKenzie & Woodruff's (2013) failure to establish positive effects of training programmes on business performance.

The human capital theory postulates that individuals or groups who possess greater levels of knowledge, skills and other competencies perform better in executing relevant tasks (Becker, 1993; Kraiger et al., 1993; Ployhart & Moliterno, 2011). It is therefore expected that education will be translated into better business performance and loan repayment. However, our analysis for the Ghanaian case shows that highly educated entrepreneurs do not repay their loans any better relative to those with primary or secondary education only.

Those entrepreneurs endowed with 15 years of business experience systematically outperform those with fewer than 15 years of experience and repay their loans better. This observation is consistent with Lans' et al. (2015) argument that business experience matters for business performance.

Female microbusiness entrepreneurs repay their loans better than do male entrepreneurs. This result is consistent with literature (Anthony & Horne, 2003; Kabeer, 2001; Kevane & Wydick, 2001; Ledgerwood, 1999; Pronyk et al., 2008; Rahman, 1999; Ridgeway & Smith-Lovin, 1999). More generally, women tend to manifest behaviours that can best be described as social, friendly and risk averse, more than do men. This may explain better loan repayment rates for female entrepreneurs (Anthony & Horne, 2003).

The present study shows that next to the male-female difference, business experience is the only constituent of human capital that was significantly related to microbusiness performance.

As we do not establish any impact of self-evaluations on entrepreneurial and business skills on loan repayment rates, future research on MFI loan repayment rates should focus on the skills of MFI loan officers, rather than MFI clients.

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Appendix a

Construct	Operationalisation	Source of operationalisation	Items/measurements	Questions
Business operations skills	General Business planning	Smith & Perks 2006/ Van Dyk et al 1992	Short-term planning	A1. You plan your business activities by documenting what to do. : 7 pt. linkert scale ranging from strongly disagree to strongly agree
		Smith & Perks 2006/ Van Dyk et al 1992	Budgeting	A2. You budget your purchase by buying your stock in bulk (on whole sale basis) : 7 pt. linkert scale ranging from strongly disagree to strongly agree
		Smith & Perks 2006/ Van Dyk et al 1992	Handling security	A3. You anticipate or foresee the possibility of theft in your business eg. loss of stock or cash. : 7 pt. linkert scale ranging from strongly disagree to strongly agree
	Record keeping	Edgcomb 2002/ Mano et al 2012/ Karlan & Valdivia 2011	Sales record	B1. You have a book keeping system for recording your daily sales. : 7 pt. linkert scale ranging from strongly disagree to strongly agree
		Edgcomb 2002/ Mano et al 2012/ Karlan & Valdivia 2011	Receipt records	B2. You have a book keeping system for recording your receipts. : 7 pt. linkert scale ranging from strongly disagree to strongly agree
		Edgcomb 2002/ Mano et al 2012/ Karlan & Valdivia 2011	Credit records	B3. You have a book keeping system for keeping your credit record. : 7 pt. linkert scale ranging from strongly disagree to strongly agree
		Edgcomb 2002/ Mano et al 2012/ Karlan & Valdivia 2011	Purchase records	B4. You have a book keeping system for keeping your purchase records. : 7 pt. linkert scale ranging from strongly disagree to strongly agree
		Edgcomb 2002/ Mano et al 2012/ Karlan & Valdivia 2011	Other expensis	B5. You have a book keeping system for recording other expensis. : 7 pt. linkert scale ranging from strongly disagree to strongly agree
		Edgcomb 2002/ Mano et al 2012/ Karlan & Valdivia 2011	Stock taking	B.6 You take stock of your items in the shop. : 7 pt. linkert scale ranging from strongly disagree to strongly agree :
		Edgcomb 2002/ Mano et al 2012/ Karlan & Valdivia 2011	Filling purchase receipts	B.7 You file your purchase receipts. : 7 pt. linkert scale ranging from strongly disagree to strongly agree
Financial Management	Edgcomb 2002/ Mano et al 2012/ Karlan & Valdivia 2011	Sources of finance	C.1 You believe that you will get finance from other MFI if you apply. : 7 pt. linkert scale ranging from strongly disagree to strongly agree	
	Edgcomb 2002/ Mano et al 2012/ Karlan & Valdivia 2011	Fixed salary	C2. You pay your self a fixed salary. : 7 pt. linkert scale ranging from strongly disagree to strongly agree	
	Edgcomb 2002/ Mano et al 2012/ Karlan & Valdivia 2011	Calculating Profit	C3. You calculate your profits. : 7 pt. linkert scale ranging from strongly disagree to strongly agree	
Interpersonal Relations	Smith & Perks 2006 / Van Dyk et al 1992	Employees reward	D1. You provide reward for a job well done. : 7 pt. linkert scale ranging from strongly disagree to strongly agree	
	Smith & Perks 2006 / Van Dyk et al 1992	Employee sanction	D2. You sanction employees for work not done well. : 7 pt. linkert scale ranging from strongly disagree to strongly agree	
	Smith & Perks 2006 / Van Dyk et al 1992	Employee procedures	D2. You create a clear working schedule and procedure for your employees. : 7 pt. linkert scale ranging from strongly disagree to strongly agree	
Customer Relations	Smith & Perks 2006 / Van Dyk et al 1992	Dealing with customers	E1. Keeping a good relationship with your customers is important. : 7 pt. linkert scale ranging from strongly disagree to strongly agree	
	Smith & Perks 2006 / Van Dyk et al 1992	Listening	E2. Listening to the concerns of your customers and using it to improve on your business is very important. : 7 pt. linkert scale ranging from strongly disagree to strongly agree	
	Smith & Perks 2006 / Van Dyk et al 1992	Understanding customer needs	E3. Understanding the needs of your customers and trying to meet them is important. : 7 pt. linkert scale ranging from strongly disagree to strongly agree	
	Smith & Perks 2006 / Van Dyk et al 1992	Perception of customers	E4. Knowing the perception of your clients gives you a better knowledge as to how to serve them better. : 7 pt. linkert scale ranging from strongly disagree to strongly agree	
Entrepreneurial orientation	Risk taking	Chen et al., 1998 /Verhees et al 2012/ Oosterbeek et al. 2012	Take calculated risk	F1. You take calculated risks in your business. : 7 pt. linkert scale ranging from strongly disagree to strongly agree
		Chen et al., 1998 /Verhees et al 2012/ Oosterbeek et al. 2012	Make decisions under pressure and risk	F2. You make decisions under pressure and risk. : 7 pt. linkert scale ranging from strongly disagree to strongly agree
		Chen et al., 1998 /Verhees et al 2012/ Oosterbeek et al. 2012	Take responsibility for ideas and decisions	F3. You take responsibility for ideas and risks you take. : 7 pt. linkert scale ranging from strongly disagree to strongly agree
		Chen et al., 1998 /Verhees et al 2012/ Oosterbeek et al. 2012	Work under pressure and conflict	F4. You work under pressure and conflicts. : 7 pt. linkert scale ranging from strongly disagree to strongly agree
	Innovativeness	Chen et al., 1998 /Verhees et al 2012	New venturing and new ideas	G1. You introduced and used new ideas over the past 5 years in your business. : 7 pt. linkert scale ranging from strongly disagree to strongly agree
		Chen et al., 1998 /Verhees et al 2012	New products and services	G2. You introduced and used new products and services over the past 5 years in your business. : 7 pt. linkert scale ranging from strongly disagree to strongly agree
		Chen et al., 1998 /Verhees et al 2012	New markets and geographical territories	G3. You have operationalized new markets and geographical territories over the past 5 years. : 7 pt. linkert scale ranging from strongly disagree to strongly agree
		Chen et al., 1998 /Verhees et al 2012	New method of production	G4. You have applied new method of production in your business over the past 5 years. : 7 pt. linkert scale ranging from strongly disagree to strongly agree
		Chen et al., 1998 /Verhees et al 2012	New method of marketing	G5. You have applied new marketing strategies in your business over the past 5 years. : 7 pt. linkert scale ranging from strongly disagree to strongly agree
		Chen et al., 1998 /Verhees et al 2012	New method of management	G6. You have applied new management style in your business over the past 5 years. : 7 pt. linkert scale ranging from strongly disagree to strongly agree
Pro-activeness	Verhees et al (2012)	Willingness to start new activities	H1. You are willing to start business activities that your competitors have not started yet. : 7 pt. linkert scale ranging from strongly disagree to strongly agree	
	Verhees et al (2012)	First to respond to new opportunities	H2. You are the first to respond to new business opportunities. : 7 pt. linkert scale ranging from strongly disagree to strongly agree	
	Verhees et al (2012)	Good at starting new activities	H3. You are good at starting businesses that your competitors have not started yet. : 7 pt. linkert scale ranging from strongly disagree to strongly agree	
	Verhees et al (2012)	Have knowledge to be the first to harvest opportunity	H4. You know how to be one of the first to use opportunities if they arise. : 7 pt. linkert scale ranging from strongly disagree to strongly agree	
	Verhees et al (2012)	Starting activities that my competitors do not do yet	H5. If you see opportunities, you are one of the first to use them. : 7 pt. linkert scale ranging from strongly disagree to strongly agree	
Market orientation	Marketing	Alby et al., 2011 /Edgcomb 2002/ Chen et al, 1998 /Verhees et al 2012	Set market shares and goals	I.1. You set market shares and goals in your business. : 7 pt. linkert scale ranging from strongly disagree to strongly agree
		Alby et al., 2011 /Edgcomb 2002/ Chen et al, 1998 /Verhees et al 2012	Set sales goals	I.2. You set sales goals in your business. : 7 pt. linkert scale ranging from strongly disagree to strongly agree
		Alby et al., 2011 /Edgcomb 2002/ Chen et al, 1998 /Verhees et al 2012	Set profit goals	I.3. You set your profit goals. : 7 pt. linkert scale ranging from strongly disagree to strongly agree
		Alby et al., 2011 /Edgcomb 2002/ Chen et al, 1998 /Verhees et al 2012	Establish position in the product market	I.4. You operate in a particular market niche. : 7 pt. linkert scale ranging from strongly disagree to strongly agree
		Alby et al., 2011 /Edgcomb 2002/ Chen et al, 1998 /Verhees et al 2012	Conduct market analysis	I.5. You conduct market analysis to improve on your business strategy. : 7 pt. linkert scale ranging from strongly disagree to strongly agree
		Alby et al., 2011 /Edgcomb 2002/ Chen et al, 1998 /Verhees et al 2012	Expand business	I.6. You expand your business by opening other branches. : 7 pt. linkert scale ranging from strongly disagree to strongly agree
Empowerment outcomes	Woman empowerment	Karlan & Valdivia 2011	Decision making	J1. You are involved in the decision making of the household. : 7 pt. linkert scale ranging from strongly disagree to strongly agree
		Karlan & Valdivia 2011	Family size	J2. You are involved in deciding how many children you should have. : 7 pt. linkert scale ranging from strongly disagree to strongly agree
		Karlan & Valdivia 2011	Money to be taken out of business	J3. You are involved in deciding how much money should be take out of the business. : 7 pt. linkert scale ranging from strongly disagree to strongly agree
		Karlan & Valdivia 2011	Payment of house hold bills	J4. You ensure that house hold bills are paid. : 7 pt. linkert scale ranging from strongly disagree to strongly agree
		Karlan & Valdivia 2011	Separation of money/ income	J5. It is necessary to separate your income from that of your spouse. : 7 pt. linkert scale ranging from strongly disagree to strongly agree
Child labour	Child labour	Karlan & Valdivia 2011	Hours Child works	K1. How many hours does the child work per day ?
		Karlan & Valdivia 2011	Hours Child go to school	K2. How many hours does the child go to school per day ?

**Good loan repayment is defined as full repayment of principal and interest before due date, on due date, or seven days past due date*

** A Likert scale of 1-7 was used ranging from strongly disagree for 1 to strongly agree for 7*