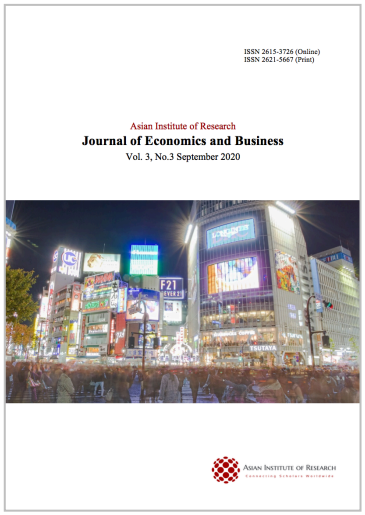

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Entrepreneurial Success for Women through Microfinance and Effect of Education: Evidence from Sri Lankan

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Abstract
Microfinance is considered a poverty alleviation strategy in most countries especially in Asia and Sri Lanka is no exception. Sri Lanka is providing microfinance services through microfinance institutions (MFIs) to poor women for setting-up and developing micro-enterprises. It has been revealed through research that there are five components of microfinance services offered in Sri Lanka namely; Microcredit, Micro-savings, Micro-insurance, Business-support, and Skills -development. The past researchers have focused on the socio-economic, environmental, and individual factors that have an impact on the entrepreneurial success of women obtaining microfinance services, however, the impact of each of these service components and their specific constituents and indicators for measuring these are not agreed upon. It is important to know the individual impact of usage of these service components on the entrepreneurial success of the users and the influence of their level of education, for the industry and policymakers. Hence the main aim of this study was to determine the relationships (magnitude and direction) of usage of these service components to entrepreneurial success and the moderating effect of level of education on microfinance service users and their entrepreneurial success. The results of the study confirmed that out of the five microfinance services (components), usage of Microcredit, Micro-savings and Skills-development had a positive relationship to entrepreneurial success and the other two services, Micro-insurance and Business-support did not have such relationship. Further, it was revealed that the level of education had moderated only the relationship between the usage of micro-savings and entrepreneurial success. Further, the study confirmed that the usage of microcredit component was the most vital service component impacting the entrepreneurial success of women. Further, specific constituents and indicators for measuring these microfinance service components have been developed.

Keywords: Microfinance, Poverty, Entrepreneurial Success, Microfinance, Women Entrepreneurs, Sri Lanka

1. Introduction

1.1 The Research Problem

The nature of inconclusiveness on the outcome of microfinance services for women to achieve entrepreneurial success, globally and locally can be observed based on the empirical research findings (Newman et al., 2013; Ahlstrom, 2010; Bruton et al., 2013). This is due to both theoretical and empirical gaps existing in the area of this specific research. Empirical research conducted as to whether microfinance services have any impact on the entrepreneurial success of women using such services in Sri Lanka is limited. Further, there is inconclusiveness on the specific components of microfinance services and attributes of women who would achieve entrepreneurial success through the use of such services.

Accordingly, both empirical and theoretical gaps have been identified in relation to this research and in order to further understand these gaps, the discussion will be extended to aspects such as who are encountering this problem, scope, and limitations related to the problem, and why this research is important from an academic perspective, as follows.

There is a strong belief among the industry professionals revealed through expert opinion, that the level of education of these women has a moderating effect on their success. Further, according to literature, researchers have found that education has a relationship to the entrepreneurial success of recipients of microfinance services (Mahmood, Hussain, & Z. Matlay, 2014, Fisher, Maritz, & Lobo, 2014). The effect of these factors appears to have been not previously researched in Sri Lanka and no evidence on such studies conducted in Asian countries too. Therefore, there exists an opportunity for researching in this area.

1.2 The Importance of the Research

Success among women is very important for a country like Sri Lanka as women constitutes almost 52 percent of the population of the country and their active participation in the economy is only 36 percent and represent 75 percent of the economically inactive population (Department of Census and Statistics, 2015). However, according to the Economic Census, 2013/14 of the Department of Census and Statistics of Sri Lanka, women own more than 93 percent of microenterprises in Sri Lanka and this sector provides the highest number of employment. Further, it is also evident from this survey that more than 26 percent of micro establishments are run by women. This percentage of women owners of microenterprises is significantly higher across the sectors considered in this study. Hence the success of women entrepreneurs is vital to microenterprise sector and to the country. On the other hand, the number of successful women entrepreneurs in general (not specific to microfinance) has found to be low in Sri Lanka (Ranasinghe, 2008). Microfinance provides financial and non-financial services mainly to women in the micro-enterprise sector to develop their entrepreneurial activity and to become successful entrepreneurs elevating from micro to small, medium and large categories. Hence, there is a need for researching the entrepreneurial success of women utilizing microfinance services and to evaluate the degree of influence exerted by each of these services on the entrepreneurial success of Sri Lankan women and to establish any moderating effect of level of education on these relationships. Identification of these moderator variable would fill the existing gap in deciding on the attributes (demographic and industry related) women who would achieve entrepreneurial success through the usage of microfinance services. The microfinance institutions who are offering these services can identify target groups of women who would really be benefited by using these services, on the basis of their education level. Hence MFIs can make use of their funding in a productive manner, which would in turn facilitate the entrepreneurial success of women which will have an impact on the overall economy of a country.

1.3 The Literature

Microfinance provides small business loans to people with low-income levels, to facilitate economic development through enhancing entrepreneurial activity. However, microfinance services include both financial and non-financial services to low-income groups (Khavul, Chavez, & Bruton, 2013. Hence, microfinance is

recognized as a development strategy for poverty alleviation through facilitating the development of the poor socially and economically, focusing on women empowerment (Yeboah, 2017). There are two main approaches in offering microfinance services to lower-income earners namely; the *poverty lending approach*, which promotes donor-funded credit for the poor taking the approach of reducing poverty through subsidized and charitable non-finance methods and the *financial system approach*, which advocates commercial microfinance for economically active poor (Robinson, 2002; Mokhtar & Ashhari, 2015). According to Robinson (2002), though the primary goal of the two approaches is the same, large-scale sustainable microfinance services can be maintained only through the financial system approach. The focus of this study is on the *Financial System Approach,* and the objective is to conduct an empirical investigation to accomplish the relationship between usage of microfinance services and entrepreneurial success of women using such services and the effect of educational qualifications of such women on these relationships. The preliminary study conducted by the author about the microfinance sector showed that the non-bank financial institutions (NBFI) registered with the Central Bank are following the financial systems approach in delivering microfinance services whilst other providers of microfinance services appear to have a mixed approach. Especially, some of the NGOs operating in the market follow a non-commercial orientation to their business and donate funds to overcome extreme poverty situations. However, NBFIs are catering to the majority of microfinance clients at present according to the information maintained by these institutions. According to the Director-Division of NBFI of the Central Bank, there are 45 NBFIs registered with the Central Bank of Sri Lanka and of which 6 NBFIs have a major share of their portfolio in microfinance. Hence research focused on the women using the microfinance services of MFIs operate on a commercial basis which was registered with the Central Bank of Sri Lanka. Further, having observed the progress of the microfinance sector by government authorities, the Government of Sri Lanka had passed a bill in the parliament to regulate the industry by the Central Bank of Sri Lanka, in 2016.

At the outset, it is useful to get a clear idea as to what the target population of this research fits into a broader context. Figure 1 displays the poverty alleviation toolbox with financial services; the third column shows nonfinancial tools for poverty alleviation that are essential for the extremely poor and also suitable for those below the poverty line.

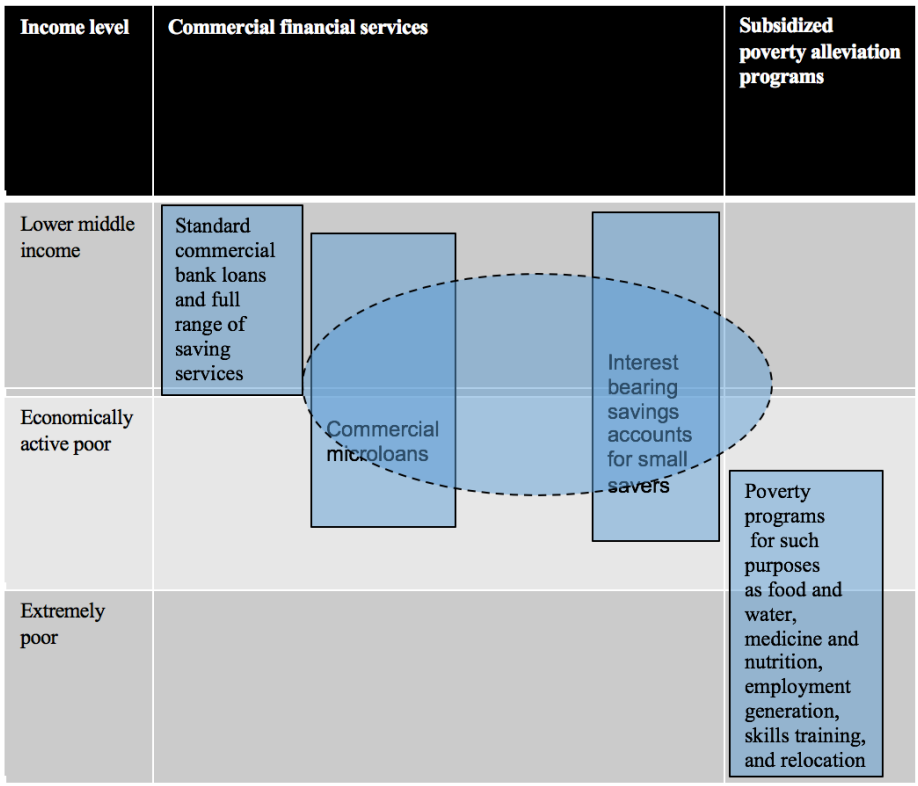

Figure 1: Financial services in the "poverty alleviation toolbox"
Source: Robinson, 2002: p.21

Hence, the third column shows the tools funded by direct subsidies or grants. Microfinance is targeted to the economically active poor to promote entrepreneurial activity on a commercial basis. Therefore, the target population of women in this study is shown (marked with a dotted ellipse) in Figure 1 who belongs to economically active and lower-income categories

2. Materials and Methods

2.1 Conceptual Framework

The foundation of the entire research project is based on the conceptual framework. If explained further, a framework is a logically derived and elaborated network of associations of variables relevant to the problem situation and identified through processes such as interviews, observation, and literature review (Sekaran & Bougie, 2010). The basic features of the schematic diagram have been illustrated in Figure 2. The schematic diagram of the conceptual model helps to visualize relationships among the variables. Important relationships that were theorized to exist among the variables are shown in this model. The basis for constructing the model was the past literature, interviews, and focus group discussions with the women using microfinance services and interviews held with industry experts and managers of MFIs. The model consists of five different service components of microfinance; microcredit, micro-savings, micro-insurance, business-support and skills development (Bernard, 2014), and the moderating variable which lead to the entrepreneurial success of women.

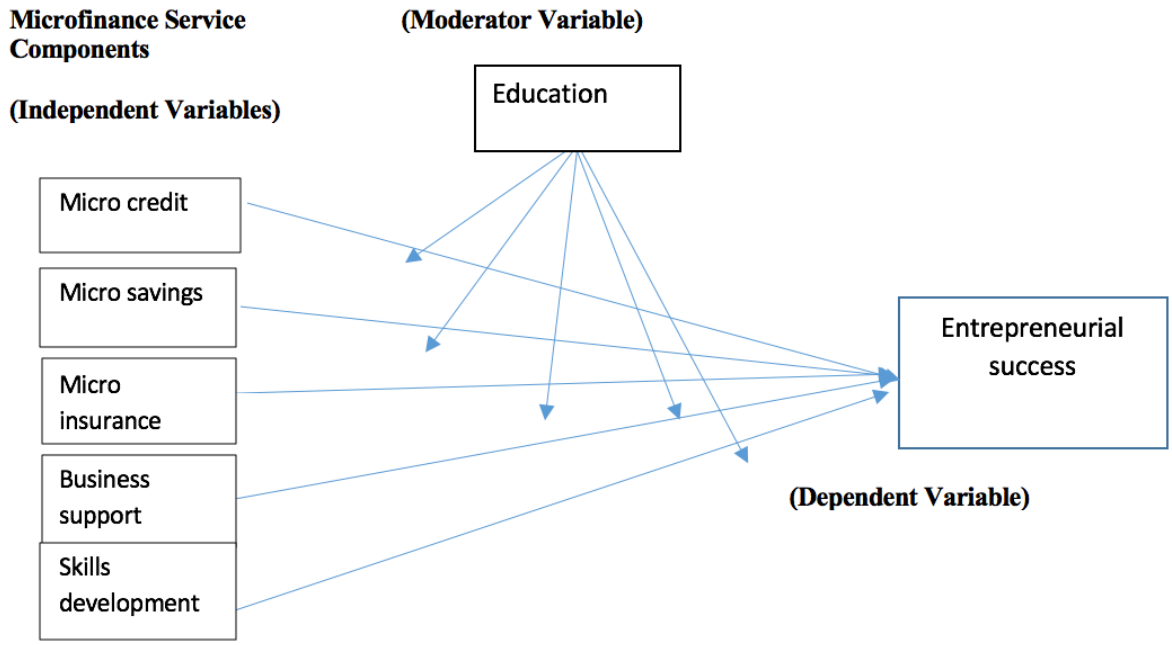

Figure 2: The relationship of microfinance variables and effect of moderating variable
Source: Developed by the Author

To study the nature and magnitude of the association between their level of education on the relationship between entrepreneurial success and each of the microfinance service components, six testable hypotheses were developed.

The following had been identified as research hypotheses for this study to understand the relationship between the usage of microfinance components and entrepreneurial success of women. According to studies conducted by Roxin (2010) in Sierra Leone, a substantial impact of microfinance had been identified on women's economic empowerment. Kabeer (2005) had concluded that access to financial services had made an important contribution to the economic productivity and social well-being of poor women and their households. On the contrary, in India, Bangladesh, and Mexico microcredit had been criticized for high-interest rates and the use of microloans for personal consumption (Roodman, 2012). Therefore, the hypothesis (H1) can be stated as follows:

H1: There exists a relationship between the usage of microcredit by women and their entrepreneurial success.
Crepon et al. (2010) and Banerjee et al. (2010) had established a positive impact of microfinance services on business income and profits based on their studies in Morocco and India, while Karlan & Zinman (2011) had concluded from their studies that increased access to microfinance in the Philippines had resulted in a reduction of the number of businesses run by entrepreneurs and the people employed. Therefore, the three following hypotheses can be developed.
H2: There exists a relationship between the usage of micro-savings by women and their entrepreneurial success.
H3: There exists a relationship between the usage of microinsurance by women and their entrepreneurial success.
H4: There is exists a relationship between usage of business support by women and their entrepreneurial success.

The poor training and lack of financial funding were major challenges for failing rural women achieving success in their enterprises in certain selected provinces in South Africa (Mogashoa, 2014). According to Hussain & Mahmood (2012), entrepreneurial attributes and characteristics of women were critical for the success of an enterprise in general and the improvement in a household with special reference to Pakistan. Raven & Le (2015) concluded by examining the outcomes of business training programs for women microcredit recipients in rural areas of Vietnam that business training can improve microenterprise performance including many other positive results, such as improved motivation, and perceptions of entrepreneurs. Therefore:

H5: There exists a relationship between the usage of skills development programs by women and their entrepreneurial success.

Further, the literature presented above on the influence of education on the relationship between entrepreneurial success and microfinance services, the following hypotheses can be developed. Therefore the sixth hypothesis can be developed as:
H6: Level of education moderates the relationship between the usage of microfinance services and entrepreneurial success of women entrepreneurs.

2.2 Data Collection and Measures

For this purpose, primary data were gathered through a pre-tested questionnaire by conducting face to face interviews with 500 women using microfinance services from Non-Bank Financial Institutions (NBFIs) authorized and registered by the Central Bank of Sri Lanka operating in three Divisional Secretariats representing the total population of women entrepreneurs in the microfinance sector and employed factor analysis and multiple regression to determine the impact of usage of microfinance services on entrepreneurial success and to determine the moderation effect of level of education.

The survey was conducted over around six weeks beginning from August 2019 to December 2019, to collect data from around 500 women using microfinance services from three selected Divisional Secretariat Divisions to get a representative sample. The interviews were administered using a structured questionnaire through face to face interviews. Hence, it was able to maintain a little over 90% response rate from the respondents and there were 471 good questionnaires for evaluation. The data were collected from women using microfinance in the sample who had been engaged in microfinance projects for periods from at least two months to more than three years to address the research problems.

A pilot study was conducted for testing the questionnaire for wording, sequencing, and layout. It also helped in gaining familiarity with respondents, estimating response rates, and questionnaire completion times (Veal 2005). Also, the pilot test provided an opportunity for researchers to recheck the questions and to minimize errors and weaknesses associated with the questionnaire.

The demographic profile of the women using microfinance services was analyzed using the frequencies relevant to such factors (see Appendix 1).

2.2.1 Assessment of Measures: Reliability and Validity of Constructs.

This study uses factor analysis as a data reduction technique and to verify the conceptualization of constructs. The validity and reliability of the constructs are tested statistically. The intention is to remove highly correlated or redundant variables from the existing data and replacing with a relatively smaller number of variables.
The results from factor analysis are discussed in this section. This research model identifies six constructs concerning five independent variables of microfinance services (Bernard, 2015) namely; microcredit, micro-savings, micro-insurance, business support, skills development, and dependent variable entrepreneurial success.

2.3 Entrepreneurial Success

This particular construct had 8 items. Likert scale of 1 to 5, was used to measure the degree of disagreement to an agreement to a stated item/ statement. According to the descriptive statistics and inter-item correlation values, there is a moderate level of agreement in all 8 items given below.

1 Profits of the enterprise increased
2 Turnover of the enterprise grew
3 Employees of my enterprise increased
4 The products of my enterprise increased
5 The buyers of my enterprise increased
6 My household income increased
7 My household assets grew
8 My household savings increased

The correlations between the items in the construct are between 0.3 and 0.9. Exploratory Factor Analysis (EFA), the Kaiser-Meyer-Olkin (KMO) value was 0.928, much higher than 0.7 which is considered to be good (Hair et al., 2012). KMO statistic (0.928) for sampling adequacy indicates that the sample is adequate to compute a single factor from the underlying instruments (indicators). A significant statistic in Bartlett's Test of Sphericity also indicates that the correlations among measurement instruments exist. 57.6% of the total variation in the 8 items was explained by a single factor (Appendix 2).

The minimum factor loading is 0.657. Thus, the construct validity corresponding to Entrepreneurial success is well justified. Moreover, the Cronbach's alpha (0.912) indicates that all underlying instruments are internally consistent and therefore reliability of the same construct is justified. The mean for the 8 items was computed as Entrepreneurial Success (ES).

2.4 Microcredit

This particular construct had 5 items. Likert scale of 1 to 5, was used to measure the degree of disagreement to an agreement to a stated item/ statement. According to the descriptive statistics and inter-item correlation values, there is a moderate level of agreement in all 5 items given below.

1 Interest charged for the loan is reasonable
2 The procedure to obtain the loan is simple
3 The amount of the loan is sufficient
4 The repayment period given is sufficient
5 The repayment procedure of the loan is easy

The correlation between items in the construct is between 0.3 and 0.9. In exploratory factor analysis (EFA), the Kaiser-Meyer-Olkin (KMO) value was 0.866, much higher than 0.7 which is considered to be good (Hair et al., 2012).

KMO statistic (0.866) for sampling adequacy indicates that the sample is adequate to compute a single factor from the underlying instruments (indicators). A significant statistic in Bartlett's Test of sphericity also indicates that the correlations among measurement instruments exist. 57.3% of the total variation in the 5 items is

explained by a single factor (Appendix 2). The minimum factor loading is 0.733. Thus, the construct validity corresponding to microcredit is well justified. Moreover, Cronbach's alpha (0.874) indicates that all underlying instruments are internally consistent and therefore reliability of the same construct is justified. The mean for the 5 items was computed and saved as microcredit (MC).

2.5 Micro Savings

This particular construct had 4 items. Likert scale of 1 to 5, was used to measure the degree of disagreement to an agreement to a stated item/ statement. According to the descriptive statistics and inter-item correlation values, there is a moderate level of agreement in all 4 items given below.

1 Interest rates on savings are reasonable
2 Attractive options are on offer for savings
3 The procedures for savings are simple
4 Savings withdrawal is easy

The correlations between the items in the construct are between 0.3 and 0.9. Exploratory Factor Analysis (EFA), the Kaiser-Meyer-Olkin (KMO) value was 0.821, much higher than 0.7 considered to be good (Hair et al., 2012). KMO statistic (0.821) for sampling adequacy indicates that the sample is adequate to compute a single factor from the underlying instruments (indicators). A significant statistic in Bartlett's Test of Sphericity also indicates that the correlations among measurement instruments exist. 61.1% of the total variation in the 4 items is explained by a single factor. The minimum factor loading is 0.645 (Appendix 2). Thus, the construct validity corresponding to microcredit is well justified. Moreover, the Cronbach's alpha (0.859) indicates that all underlying instruments are internally consistent and therefore reliability of the same construct is justified. The mean for the 4 items was computed and saved as micro-savings (MS) to be used in further analysis.

2.6 Micro Insurance

This particular construct had 5 items. Likert scale of 1 to 5, was used to measure the degree of disagreement to an agreement to a stated item/ statement. According to the descriptive statistics and inter-item correlation values, there is a moderate level of agreement in all 5 items given on the next page (ie. pg.10).

1 Benefits offered in Insurance policies are effective
2 There is a wide selection of insurance policies
3 It is compulsory to obtain an insurance policy
4 Premiums charged for insurance policies are reasonable
5 Insurance claims are paid promptly

The correlation between items in the construct is between 0.3 and 0.9. Exploratory Factor Analysis (EFA), the Kaiser-Meyer-Olkin (KMO) value was 0.846, much higher than 0.7 considered to be good (Hair et al., 2012). KMO statistic (0.846) for sampling adequacy indicates that the sample is adequate to compute a single factor from the underlying instruments (indicators). A significant statistic in Bartlett's Test of Sphericity also indicates that the correlations among measurement instruments exist. 55.4% of the total variation in the 5 items is explained by a single factor. The minimum factor loading is 0.724. Thus, the construct validity corresponding to microcredit is well justified (Appendix 2). Moreover, the Cronbach's alpha (0.852) indicates that all underlying instruments are internally consistent and therefore reliability of the same construct is justified. The mean for the 5 items was computed and saved as micro-insurance (MI).

2.7 Business Support

This particular construct had 5 items. Likert scale of 1 to 5, was used to measure the degree of disagreement to an agreement to a stated item/ statement. According to the descriptive statistics and inter-item correlation values, there is a moderate level of agreement in all 5 items given below.

1 Assistance from Business Support programs for marketing was useful
2 Assistance from Business Support programs for product improvement was adequate
3 Assistance from Business Support programs for operating my enterprise was useful
4 The knowledge given by Business Support programs to improve products was sufficient
5 The knowledge given by Business Support programs on marketing was sufficient

The correlation between the items in the construct is between 0.3 and 0.9. Exploratory Factor Analysis (EFA), the Kaiser-Meyer-Olkin (KMO) value was 0.879, much higher than 0.7 considered to be good (Hair et al., 2012). KMO statistic (0.879) for sampling adequacy indicates that the sample is adequate to compute a single factor from the underlying instruments (indicators). A significant statistic in Bartlett's Test of Sphericity also indicates that the correlations among measurement instruments exist. A single factor was extracted that explained 66.3% of the total variation in the 5 items. The minimum factor loading is 0.783. Thus, the construct validity corresponding to microcredit is well justified. Moreover, Cronbach's alpha (0.907) indicates that all underlying instruments are internally consistent and therefore reliability of the same construct is justified (Appendix 2). The mean for the 5 items was computed and saved as business support (BS).

2.8 Skills Development

This particular construct had 4 items. Likert scale of 1 to 5, was used to measure the degree of disagreement to an agreement to a stated item/ statement. According to the descriptive statistics and inter-item correlation values, there is a moderate level of agreement in all 4 items given below.

1 I benefitted from skills development programs in running my business
2 Number of skills development programs conducted were adequate
3 Skill development programs facilitated me in improving my social status
4 Skills development programs facilitated me in improving my family life

The correlation between each item in the construct is between 0.3 and 0.9. Exploratory Factor Analysis (EFA), the Kaiser-Meyer-Olkin (KMO) value was 0.802, which is much higher than 0.7 considered to be good (Hair et al., 2012). KMO statistic (0.802) for sampling adequacy indicates that the sample is adequate to compute a single factor from the underlying instruments (indicators). A significant statistic in Bartlett's Test of Sphericity also indicates that the correlations among measurement instruments exist. 62.8% of the total variation in the 5 items is explained by a single factor. The minimum factor loading is 0.657. Thus, the construct validity corresponding to microcredit is well justified. Moreover, Cronbach's alpha (0.869) indicates that all underlying instruments are internally consistent and therefore reliability of the same construct is justified (Appendix 2). The mean for the 5 items was computed and saved as Skills Development (SK).

2.9 Reliability of Individual Items

The reliability of individual items was assessed by examining their internal consistency values using construct reliability, Average Variance Extracted (AVE), and Cronbach's alpha values. The summary of Individual Items Reliability of the constructs is given in Table 1.

Generally, composite reliability and AVE values above 0.9 and 0.5 respectively, are acceptable (Viljoen & Dunga, 2013). Further, Cronbach's Alpha value should exceed a minimum value of 0.7 (Hair et al., 2010). Hence the relevant values are given in Table 1 satisfy the minimum threshold values and the reliability of items was adequate. Hence data were consistent and reliable for further analysis.

Table 1: Summary of Individual Items Reliability of the Constructs

Construct	**No. of Items**	**AVE**	**Composite Reliability**	**Cronbach's Alpha**
Entrepreneurial success	8	0.57	0.943	.912
Microcredit	5	0.59	0.926	.874
Micro-savings	4	0.61	0.916	.859
Micro-insurance	5	0.55	0.915	.832
Business support	5	0.66	0.943	.907
Skills development	4	0.62	0.922	.869

2.10 The validity of the Constructs

Besides factor analysis, the discriminant validity was tested using AVE. As per Hair et al. (2010) the AVE should be greater than 0.5 and higher than the corresponding inter-construct squared correlations. Table 2 presents the AVE for each construct and square of the correlations between each construct and the others.
The values in Table 2 confirm the discriminant validity of each construct (i.e. AVE of each construct was greater than the corresponding inter-construct squared correlations). Hence, it can be concluded that discriminant validity has been achieved. Further, none of the correlation coefficients of corresponding inter-construct correlations was above 0.85, indicating the absence of multicollinearity issue in the model. Hence, this was not in violation of the assumption of independence of the predictors.

Table 2: Inter –construct Squared Correlations Matrix

	ES	MC	MS	MI	BS	SK
ES	0.57*					
MC	0.35**	0.59				
MS	0.34	0.43	0.61			
MI	0.28	0.39	0.58	0.55		
BS	0.27	0.36	0.41	0.44	0.66	
SK	0.31	0.38	0.38	0.33	0.75	0.62

* AVE
** Squared correlation coefficient

Therefore, the above analysis shows that all six constructs used in this study satisfy the validity and reliability requirements.

The mean scores of the six constructs are shown in Table 3.

Table 3: Descriptive statistics and correlations among five microfinance service variables

Items	Descriptive statistics						
	Mean	SD	MC	MS	MI	BS	SK
MC	4.0764	.77817	1.000	.599	.623	.653	.616
MS	4.0993	.80921	.599	1.000	.662	.644	.806
MI	3.9949	.85719	.623	.662	1.000	.762	.577
BS	4.0101	.86758	.653	.644	.762	1.000	.623
SK	4.0706	.81602	.616	.806	.577	.623	1.000

There is a moderate level of association between the five constructs (Table 3). The mean values for all the constructs are towards 4. Hence there exists a moderate level of association among the five constructs. The

correlations for each construct between them are between 0.3 and 0.9. Thus microfinance service variables correlate adequately. The highest correlation between each factor does not exceed 0.80, as such, there is no issue concerning multicollinearity between the five microfinance service variables.

3. Results

3.1 The Fitness of the model with direct effects due to independent variables

Table 4: Results of Model Summary

R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
.666	.444	.438	.62689	1.114

According to Table 4, the basic model can explain 44.4% of the variation of entrepreneurial success of women by the five predictor variables identified in the model, namely microcredit, micro-savings, micro-insurance, business support and skills development programs.

Table 5: Results of Analysis of Variance (ANOVA)

Model		Sum of Squares	df	Mean Square	F	Sig.
	Regression	145.743	5	29.149	74.171	.000[b]
	Residual	182.742	465	.393		
	Total	328.484	470			

Dependent Variable: ES
Predictors: (Constant), SK, MI, MC, MS, BS

According to Table 5, the p-value is less than .001 in ANOVA, the overall model appears to be significant with at least one independent variable in the model.

Table 6: The table of Regression Coefficients for Entrepreneurial Success (ES) upon Microfinance Services

Variables	Unstandardized Coefficients		Standardized Coefficients	t	P-value.	
	B	Std. Error	Beta			VIF
(Constant)	.839	.172		4.873	.000	
Microcredit	.298	.054	.277	5.555	.000	2.080
Bus. Support	.005	.066	.005	.070	.944	3.449
Micro Ins	.068	.056	.069	1.199	.231	2.803
Micro Saving	.208	.057	.216	3.663	.000	2.898
Skills Deve	.212	.063	.207	3.365	.001	3.171

Dependent Variable: Entrepreneurial Success

Table 6 above depicts that out of five microfinance service variables, p-values of Business Support and Micro Insurance are more than 0.05. Hence, Business Support and Micro Insurance are not significant predictors of the Entrepreneurial Success of women using microfinance services.

The p-values for Microcredit, Micro Savings, and Skills Development are less than 0.05. As such, Microcredit, Micro Savings, and Skills Development are significant predictors of the Entrepreneurial Success of women using microfinance services. Further, the variance inflation factor (VIF) values success is less than 5. Hence, there is no problem of multicollinearity. Among the tested variables, Microcredit, Micro Savings, and Skills Development are significant predictors of entrepreneurial success of women using microfinance services, and 44.4% of the variation in Entrepreneurial success (ES) is explained by Microcredit (MC), Micro-savings (MS) and Skills development (SK). The equation can be written as follows:

ES = 0.839 + 0.298(MC) + 0.208(MS) + 0,212(SK)

Table 7: Model summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.592[a]	.350	.349	.67474	
2	.645[b]	.416	.414	.64002	
3	.665[c]	.442	.438	.62663	1.120

a. Predictors: (Constant), MC
b. Predictors: (Constant), MC, MS
c. Predictors: (Constant), MC, MS, SK
d. Dependent Variable: ES

The Stepwise Regression of the Entrepreneurial Success upon the Microfinance Service dimensions (Basic Model) is given in Table 7. Microcredit explained 35% of the variation in entrepreneurial success (ES). When variables Micro-savings and Skills development were entered another 6.6% and 2.6% of the variation of the independent variable ES was explained respectively. All three models with p values < 0.001are significant (Table 8).

Table 8: Results of Analysis of Variance -ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	114.962	1	114.962	252.512	.000[b]
	Residual	213.523	469	.455		
	Total	328.484	470			
2	Regression	136.779	2	68.389	166.955	.000[c]
	Residual	191.706	468	.410		
	Total	328.484	470			
3	Regression	145.110	3	48.370	123.184	.000[d]
	Residual	183.375	467	.393		
	Total	328.484	470			

a. Dependent Variable: ES
b. Predictors: (Constant), MC
c. Predictors: (Constant), MC, MS
d. Predictors: (Constant), MC, MS, SK

According to this equation; every unit of increase in MC, ES will increase by 0.298 provided MS and SK remained unchanged. Similarly, one unit of increase in MS and one unit of increase in SK will increase 0.208 and 0.212 increase in ES respectively if the other two variables remained unchanged. This means that the highest level of a direct effect on ES was brought by MC and the effect of the other two variables MS and SK brought lesser effect contributing 0,208 and 212.

According to Table 8, the p-values are less than .001 in ANOVA, the overall model appears to be significant with at least one independent variable in the model.

Table 9: The table of Stepwise Regression Coefficients for Entrepreneurial Success (ES) upon Microfinance Services -Final Model

Variables	Unstandardized Coefficients		Standardized Coefficients	t	p-value	Collinearity Statistics
	B	Std. Error	Beta			VIF
(Constant)	.871	.169		5.163	.000	
Microcredit	.311	.052	.290	5.941	.000	2.080
Micro Saving	.247	.047	.257	5.221	.000	2.898
Skills Deve	.223	.048	.218	4.606	.000	3.171

Dependent Variable: Entrepreneurial Success (Only significant predictors are shown in the table)

Table 9 above further confirms that out of five microfinance service variables, only three variables; Microcredit, Micro Savings, and Skills Development are significant contributors in this model, with microfinance making the highest contribution. As such, Microcredit, Micro Savings, and Skills Development are significant predictors of the Entrepreneurial Success of women using microfinance services. Further, the variance inflation factor (VIF) values are less than 5. Hence, there is no problem of multicollinearity. In the residual plot, all the residual values were within plus and minus 3 and were at random. Further distribution of the residual was normal. The R-squared value increased from 0.350 to 0.442. This means 44.2% of the variation in ES can be explained by three service quality dimensions; MC, MS, and SK. According to beta values, microcredit (MC) affects the most on entrepreneurial success (ES) among those three significant variables. The equation can be written as follows:
ES = 0.871 + 0.311(MC) + 0.247(MS) + 0.223(SK)

3.2 The Fitness of the Model with interactions due to the moderating variable (Stepwise Regression)

To test the fitness of the full model with the moderating variables; Level of Education and Ethnicity, a regression model with stepwise selection is employed. The final model summary is shown in Tables 10, 11, and 12.

According to Table 10, 45.3% of the variation in Entrepreneurial Success (ES) is explained by the model. The value Durbin-Watson is 1.51 which is not too far from 2, however, this could indicate a slight autocorrelation.

Table 10: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
4	.673	.453	.448	.62171	1.1

Table 11: Results of Analysis of Variance (ANOVA)

Model		Sum of Squares	df	Mean Square	F	Sig.
4	Regression	148.853	4	37.213	96.538	.000[b]
	Residual	179.632	466	.385		
	Total	328.484	470			

According to Table 11, the p-value is less than .001, which means that at least one of the variables can be used to model Entrepreneurial Success.

Table 12: The table of Regression Coefficients for Entrepreneurial Success (ES) upon Microfinance Services and Moderator variables

Variables	Unstandardized Coefficients		Standardized Coefficients	t	p-value.	Collinearity Statistics
	B	Std. Error	Beta			VIF
(Constant)	.882	.167		5.271	.000	
Microcredit	.314	.052	.292	6.039	.000	1.993
Micro-svings	.240	.047	.249	5.116	.000	2.026
Skills Deve	.218	.048	.213	4.552	.000	1.868
MS_ALplus	.076	.025	.107	3.116	.002	1.007

Dependent Variable: Entrepreneurial Success (Only significant predictors are shown in the table)

According to Table 12, p-values for Microcredit, Micro-savings, Skills development are less than .001which confirms our previous results that Microcredit, Micro-savings, and Skills development are significant predictors in explaining the variation in Entrepreneurial success. Further, the p-value moderating effect of the education level of respondents possessing higher than Advanced Level on the relationship between Micro-savings and Entrepreneurial Success is less than .05. Hence, the relationship between Micro-savings and Entrepreneurial success is moderated by educational qualifications higher than GCE Advanced Level. The standardized beta coefficients suggest that microfinance (.292) has the highest contribution in explaining the variation in Entrepreneurial while Micro-savings and Skills development have standardized coefficients .249 and .213 respectively. Since the VIF values are less than 5, there is no issue concerning multicollinearity (Denis, 2011). According to the residual analysis, it is evident that residuals can be assumed to follow a normal distribution. Because histogram appears to be symmetric while the normal probability plots indicate the linearity. The mean of the residuals is also close to zero. The scatter plot between predicted and residual values does not indicate major deviations from the constant variance assumption, except for the unusual behavior on the top right-hand side of the plot, which may be possibly due to the inclusion of the interaction effect on the model. Moreover, the Durbin Watson statistic which is 1.151 indicates a slight autocorrelation in residuals, however, negligible in the presence of a large sample.

The equation can be written as follows:
ES = 0.882 + 0.314(MC) + 0.240(MS) + 0.218(SD) + 0.076 (MS_ALplus)

According to the p-value in ANOVA, the overall model appears to be significant with at least one independent variable in the model. In studying the coefficients variables Microcredit (MC). Micro Savings (MS) and Skills Development (SD) are significantly related to Entrepreneurial Success (ES) with positive coefficients. Out of moderating variables identified in this study, the educational level higher than has a significant positive impact on the relationship between Micro Savings and Entrepreneurial Success. None of the other moderating variables have a significant influence on the relationships between microfinance service variables and entrepreneurial success.

3.3 Findings of In-depth Interviews and observations

To find out reasons for the exclusion of micro-insurance and business support as significant variables for the entrepreneurial success of women using microfinance services, in-depth interviews were conducted.

3.3.1 Microinsurance

The finding of the in-depth discussions is given in Exhibit-1& 2. Three such discussions were held in the three geographic locations survey was conducted.

Exhibit-1: Micro-insurance

The micro-insurance benefits we as users of microfinance services have experienced, was not for us, our benefit. The objective of the micro-insurance policies was to ensure the repayment of the loan we have obtained to the micro finance organization, in case we find it not possible to re-pay due to an unforeseen incident such as an accident or major disaster in the family, we had to face with. Therefore we do not perceive micro-insurance as a service which would facilitate our entrepreneurial success.

The finding of the in-depth discussions on micro-insurance is given in Exhibit-1. Three such discussions were held in all three geographic locations survey was conducted. All three groups comprising of 8 women in each group who participated in the in-depth interviews expressed the same opinion about their perceptions and feelings about micro-insurance though their expressions were different.

Business support

Exhibit-2: Business support

We were given some introductory lessons on how to keep accounts and how to look for business opportunities. Other than these no programs were conducted with the objective of improving the products or services we offer to our clients as micro-entrepreneurs. Further microfinance organization we dealt with do not offer any assistance in disposing our products or finding clients for the services we offer. Therefore, we do not feel that we receive any support in conducting our business from the microfinance organization we were clients of.

The finding of the in-depth discussions on business support is given in Exhibit-2. Three such discussions were held in the three geographic locations survey was conducted. All three groups comprising of 8 women in each group who participated in the in-depth interviews expressed the same opinion about their perception of micro-insurance.

Since the data collection was through “face to face “interviews, it was able to observe the following regarding the influence of microfinance service dimensions on the entrepreneurial activities of women in the sample of women using such services.

Microcredit appears to be the most important service dimension of microfinance which impacts on the expansion of business opportunities and earning capacity. Microcredit had been the main source of setting up new businesses of these women. A vast majority of interviewees had been able to expand their existing businesses and start new ventures in potential areas identified by them. However, it was also observed that most of these women had obtained microcredit from some MFIs increasing their indebtedness. This appears to harm the successful operation of their entrepreneurial activities as they had become over-indebted hence causing delays in the re-payment of the loans they had obtained from MFIs.

According to a majority of respondents, micro-savings had been useful to them as an additional source of funding in the expansion and start of new ventures. Further, these savings had been useful in facing unexpected downturns in their business activities facilitating the risk-taking ability.

As seen in Exhibit 1 and 2, the perception of the usefulness of micro-insurance and business support was poor. However, the women who used microfinance services admitted that they need to improve their basic skills in doing business as most of their education level was low. Our field observations showed that skills development programs conducted by the MFIs had not catered to the needs of these women and not facilitated in developing

their skills. Further our discussions with the officers of MFIs confirmed this view and we also realized that MFIs had not given high priority for conducting skills development programs of these women who were their clients.

4. Discussion

4.1 Microcredit and Entrepreneurial Success.

An essential component of microfinance services is microcredit which has a positive relationship with the entrepreneurial success of women entrepreneurs according to our study. This complies with the findings of past studies. Roxin (2010); Kabeer (2005) and Ameer (2013) confirmed this finding according to their research studies conducted in Sierra Leone, Pakistan, and Kenya respectively. The recent research studies conducted in countries such as Bangladesh, India, Tanzania, and China confirmed that microfinance services encompass financial and non-financial services. They also point out that many MFIs still focus on microcredit in offering their microfinance services. A research conducted in Pakistan to study the impact of microcredit on poverty reduction of female entrepreneurs supports that there is a positive relationship between these two variables (Hussain & Mahood, 2012). According to studies conducted in Uganda by Morris and Barnes (2005), it was concluded that microfinance had contributed to a reduction in financial vulnerability through diversification of income sources and accumulation of assets. However, there were some opposing results on microcredit according to studies conducted in India, Bangladesh, Nigeria, and Mexico. However, some of these studies had further highlighted the fact that this finding would have been due to implementation and performance-related issues of MFIs rather than connected to the concept of microfinance. Another argument of critiques of microfinance is that microfinance burdens the poor with additional debt rather than reducing their poverty. Microfinance contributes to the generation of employment by way of self-employment, financing setting-up new businesses, and for expanding existing businesses (Tilakeratna & Wickramasinghe, 2005). According to an impact assessment survey conducted by Colombge (2004) in Hambantota and Monaragala districts in Sri Lanka, the business performance of microfinance clients were better than other clients who are non -members of microfinance institutions(those who had not obtained microfinance services).

Although, there were few criticisms about the positive outcome of microcredit in achieving entrepreneurial success the studies conducted in Sri Lanka on microfinance confirmed its' positive contribution in achieving entrepreneurial activities and family wellbeing. Hence The empirical results of this study support and substantiate the first hypothesis H1 confirming a positive and significant relationship between usage of microcredit and entrepreneurial success.

4.2 Micro-savings and Entrepreneurial Success.

There exists a positive and significant relationship between micro-savings and entrepreneurial success as per the findings of this study. The results are in agreement with many a researcher in Sri Lanka and other countries as well.

The importance of savings can be considered in the client's point of view and that of microfinance institutions. Savings are an effective mechanism to clients for liquidity management (Manzoor & Jalil, 2014) and also savings are a useful tool to MFIs in three ways (a) important source for funds with low cost (b) lower liquidity risk compared to large savings (c) small deposits and savings are steadier capital source than reimbursing it from donor funds (Khursheed *et al*., 2012). The MFIs are providing loans to their clients not only to increase their entrepreneurial activity but also to mobilize their savings through which the poor can secure their future and feel safe. According to most of the authors, savings would be useful in fulfilling the funding requirements for the expansion of current enterprises and the creation of new ones (Newman, Schwarz & Borgia, 2013). The results of quasi-experimental research conducted in Sri Lanka suggest that overall program participants who had benefited had been pro-poor. According to this study, concerning both household per capita income and savings of participants of the program had a positive impact for all low-income households (De Silva, 2012).

The empirical results of this study support and substantiate the second hypothesis H2, and this relationship is positive and significant according to the results of the regression model.

*4.3 Skills Development and Entrepreneurial Success***.**

According to the findings of the study, there exists a positive and significant relationship between skills development and entrepreneurial success in Sri Lanka.

Shaw (2004) states that, though the businesses supported through microfinance can have lower barriers to entry, entrepreneurial women would still face financial, social, and cultural barriers to set-up and develop high growth businesses. According to Brixiova (2010), this would suggest a need for training for potential women entrepreneurs. Hence training in business management and networking was found to help promote entrepreneurial skills according to Karlan & Valdivia (2011). Managerial competencies are a set of knowledge, skills, behaviors, and attitudes that contribute to personal effectiveness (Underwood, 2012). Harris (2008) had found that the lack of managerial experience and skills are the main reasons for the failure of new firms. Further, it was pointed out that the lack of education and training had reduced the managerial capacity of new firms (Witboi & Ukpere, 2011). A few empirical studies conducted in Sri Lanka support this view (Attapattu, 2009; Ranasinghe, 2008). Ranasinghe (2008) has identified "competencies" as one of the six factors contributing to the success of women entrepreneurs in Sri Lanka. To develop competencies skills development programs are a requirement. This implies that skills development programs for women in microfinance have a positive impact on entrepreneurial success. The main objective of microfinance programs is the human development that is geared to both the economic and social uplift of their clients. MFIs offer supportive services to borrowers facilitating their human development enhancing their entrepreneurial activity. The objective of these services is to create sustainable changes in the lives and livelihood of the poor, women in particular (BRAC-Annual Report, 2005). No literature was found negating the importance of skills development concerning entrepreneurial success.

The results of this empirical study support and substantiate the fifth hypothesis H5 and this relationship is positive and significant according to the results of the regression.

4.4 Micro-insurance and Entrepreneurial success

According to the findings of the study, this relationship was not supported by the empirical evidence of this study. Though the scholars have identified micro-insurance as one of the factors of microfinance services, the relationship of this variable to entrepreneurial success had not been empirically tested according to the available literature. Sri Lankan NBFIs have formulated insurance schemes to recover non-payment of loans by the women entrepreneurs in case of a serious eventuality, from the insurer. Hence from women entrepreneurs, micro-insurance appears to have not been perceived as useful for entrepreneurial success. According to previous literature, it was not possible to find any specific findings of the relationship between micro-insurance provided to women in the microfinance sector and the entrepreneurial success of these entrepreneurs. The empirical results of this study do not support and substantiate the third hypothesis H3.

4.5 Business support and Entrepreneurial Success

According to the findings, the relationship between business support and entrepreneurial success is not significant though according to past researchers external support which includes institutional support has been identified as a contributing factor to entrepreneurial success (Ranasinghe, 2008). This may be due to the varying nature of external support offered by the MFIs in different environmental conditions. Our investigations revealed that some MFIs offer business support to the extent of disposing of the finished products of some of these entrepreneurs while some others offer business support in the form of technological development of products and business opportunity identification. According to the findings of this study, the relationship between business support and entrepreneurial success is not significant though according to past researchers external

support has been identified as a contributing factor to entrepreneurial success. The empirical results of this study do not support and substantiate the fourth hypothesis H4.

The overall results of the multiple regression analysis of the full model and the hypotheses tested are presented in Table 14.

Table 14: Results of Hypotheses tested in the Multiple Regression Model

Hypothesis	Results
H1: There exists a relationship between microcredit and entrepreneurial success of women using these services.	Supported
H2: There exists a relationship between the usage of micro-savings and the entrepreneurial success of women.	Supported
H3: There exists a relationship between the usage of microinsurance and the entrepreneurial success of women.	Not supported
H4: There exists a relationship between the usage of business support and the entrepreneurial success of women.	Not supported
H5: There exists a relationship between the usage of skills development programs and the entrepreneurial success of women.	Supported
H6: Level of Education of women moderate the relationship between usage of microfinance services and entrepreneurial success.	Supported

5. Contribution

A measure of entrepreneurial success may lead to the identification of current and future success of ventures and improve public policies facilitating the success of start-ups. In this study, indicators to measure the entrepreneurial success of women in the microfinance sector in Sri Lanka has been developed which predicts variations in the three variables identified for measuring entrepreneurial success namely growth of existing enterprises, creation of new enterprises which was introduced by Newman, Schwarz & Borgia (2013) in their conceptual framework and household/family development of women using microfinance services introduced from this study. This could be considered a major contribution to the theory in the field of microfinance.

The conceptual framework and research propositions developed in this study could be considered another significant contribution as it would be beneficial to researchers, policymakers and providers of microfinance in general as it helps them to understand the mechanisms by which provision of microfinance services can facilitate new enterprise creation, growth of existing enterprises and improve household/family affairs.

This study also fulfills the gap in the literature as researching the relationship of using individual services of microfinance to entrepreneurial success had not been available. As the individual relationship of each of the microfinance services and their significances have been estimated using regression models, service providers in the sector can decide what services are to be given priority in offering their service packages. This will in turn improve the resource utilization of the firms operating in the sector.

6. Research Limitations

In keeping with the scope of the research to study women entrepreneurs using microfinance services from commercially oriented organizations (as against non-governmental organizations which provide such services on

"no profit basis") a survey of women receiving microfinance services from the Non-Bank Financial Institutions (NBFIs) registered by the Central Bank of Sri Lanka was conducted in obtaining data for the study. This decision is taken due to the non-availability of a sample frame to select a sample of women entrepreneurs using microfinance services. However, other than the NBFIs there are many other institutions providing microfinance services on a commercial basis to women entrepreneurs in Sri Lanka hence this can be considered as a limitation of the study.

7. Conclusions

According to the empirical results presented in this paper out of the five microfinance service components identified based on previous literature and observations carried out in the microfinance sector in Sri Lanka, usage of only three service dimensions are significant predictors of entrepreneurial success of women. Further, the moderator variable, the level of education was supported. The effect of the moderator variable was significant when women in microfinance have higher qualifications than GCE- Advanced level on the relationship between micro-savings and their entrepreneurial success and it has no impact on other relationships namely between usage of microcredit and entrepreneurial success, usage of skills development and entrepreneurial success.

Another important finding of this study was the determination of appropriate items for each construct representing five independent variables; namely microcredit, micro-insurance, business-support, and skills-development. Also, appropriate items representing entrepreneurial success were identified. These constructs have been tested statistically for their representativeness, validity, and reliability.

From the in-depth interviews, it was evident that statistical findings are supported by the ideas expressed by these women who used microfinance services. Further, it was felt that the differentiation between business support programs and skills development programs were not very much differentiated in the mind of microfinance service users. Further, it was evident that the MFIs have not paid sufficient attention to offering useful programs for developing the entrepreneurial skills of women and the scope of the business development programs had not covered important aspects of business development activities. Micro-insurance policies obtained by MFIs in Sri Lanka do not act as a risk-reducing instrument for women entrepreneurs but rather a safeguard mechanism for MFIs to collect their dues in case of unexpected events which will cause the inability for repayment of loans by the women. In considering the qualitative and quantitative findings both seem to be re-enforcing each

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Appendix 1: Table of frequencies of Demographic factors

Variable	Frequency	Percent
Age		
less 25	8	1.7
25-30	92	19.5
30-35	122	25.9
35-40	100	21.2
40-45	91	19.3
45-50	30	6.4
More 50	28	5.9
Education		
Up to GCE(OL)	430	91.3
Up to GCE(AL)	34	7.2
Up to Degree	7	1.5
Up to Post Graduate	0	0
Ethnicity		
Sinhalese	239	50.7
Tamil	171	36.3
Muslim	41	8.7
Other	20	
Experience in Microfinance		
1> year	90	19.1
1-2 years	259	55.0
2-3 years	85	18.0
More than 3 years	37	7.9
Marital Status		
Married	346	73.5
Single		
Others	51	10.8
Religion	74	15.7
Buddhist	143	30.4
Christian	135	28.7
Islam	64	13.6
Hindu	129	27.3

Appendix 2: Factor Analysis

Construct	Measurement Items	Factor Loading	KMO Measure	Bartlett's test of Sphericity
Entrepreneurial Success	Profits of my enterprise increased	0.790	0.928	0.000
	Turnover of my enterprise grew	0.829		
	Employees of my enterprise increased	0.632		
	The products of my enterprise increased	0.834		
	The buyers of my enterprise increased	0.816		
	My household tend to increased	0.764		
	My household assets increased	0.792		
	My household savings increased	0.833		
Microcredit	Interest charged for the loan was reasonable	0.778	0.866	0.000
	The procedure to obtain the loan was simple	0.084		
	The amount of the loan was sufficient	0.880		
	The loan repayment period was sufficient	0.884		
	The loan repayment procedure was easy	0.861		
Micro-savings	Interest on savings were reasonable	0.847	0.821	0.000
	Attractive options were on offer for savings	0.864		
	The procedures for savings were simple	0.851		
	Savings withdrawal was easy	0.838		
Micro-insurance	Benefits offered in insurance policies were effective	0.797	0.846	0.000
	There was a wide selection of insurance policies	0.800		
	It was compulsory to obtain an insurance policy	0.743		
	Premiums charged were reasonable	0.819		
	Insurance claims are paid promptly	0.806		
Business support	Assistance from business support programs for marketing was useful	0.878	0.879	0.000
	Assistance from business support programs for product was adequate	0.862		
	Assistance from business support programs for operating my enterprise was useful	0.861		
	Knowledge given from business support programs to improve product was sufficient	0.845		
	Knowledge given from business support programs on marketing was sufficient	0.850		
Skills development	I benefitted from skills development programs in running my business	0.874	0.880	0.000
	Number of skills development programs were adequate	0.872		
	Skills development programs facilitated me in improving my social status	0.873		
	Skills development programs facilitated in improving my family life	0.816		