

IMPACTS OF VSLAS ON THE SOCIAL WELLBEING OF SMALL BUSINESSES OPERATORS IN KWARA STATE, NIGERIA

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Abstract

It has become a notable issue that availability of credit facilities to small businesses increases their level of productive activities and, thus, increases their wellbeing. This paper was, therefore, conducted to verify the true influence of VSLAs on education enrolment ratio of small businesses owners' children and health status of operators. This study employed a survey data, which were analysed with both the descriptive and inferential approaches. A sample of 493 small businesses were used. Ordinary least squares and logit methods were employed as the estimation technique. The findings of this study revealed that financial services of VSLA, as well as the non-financial service, have counter-effects on the social wellbeing of small businesses operators in Kwara State. The study concluded that VSLAs' financial and non-financial services greatly influence the performance of small businesses despite the fact that these services have contributed little or nothing to the social wellbeing of small business operators and their household members. The paper therefore, recommends that policy makers should take painstaking effort to enlighten small business operators to exercise caution in meeting the over ambitious saving target of VSLAs activities.

Keywords: VSLA, financial, non-financial, small businesses and wellbeing.

Jel. Code: G21, I31.

1. Introduction

The importance of credit facilities to small businesses, particularly those in rural areas, has been argued in the literature. Small businesses in rural economies are characterized by insufficient financial resources to execute their business plans. This makes the ability to smoothen consumption, to access credit and to employ risk-coping strategies very important for households living under such circumstances (Conning and Udry 2007). Nevertheless, the history of rural financial intermediation is not encouraging and the recent explosive growth in microfinance globally has concentrated in urban and semi-urban areas (Demirgüç-Kunt and Klapper 2012, Allen and Panetta 2010).

Research conducted on financial support to small businesses in Africa shows that there is improved access to credit by urban SMEs overtime in Africa but small businesses in rural areas have continued to suffer financial challenges. Existing research indicates that 50% of the SMEs operate in a financial deficit and some of the SME owners are still uncomfortable with such credit extended to them (Anyanwu, 2004). The SMEs have registered a low return on capital employed and low net profit margin and kept a small capital size and some of them failed to run their daily operations because they do not have the capacity to maintain adequate liquidity levels (Chakrabarty, 2011). As such, the relationship between the Micro Finance Institutions (MFIs) and SMEs keeps on deteriorating due to failure to fulfil their loan obligations (Danjuma, 2017). This could be due to the stringent credit terms that include interest rates, collateral securities, and loan repayment schedules, among others, which seem to frustrate businesses financially.

The recent proliferation of innovative microfinance programs, often based on a group-lending methodology, has been largely inspired by the belief that such programs reach the poor and have a positive impact on various measures of their welfare, including economic measures (e.g., wealth and income), social measures (e.g., educational attainment and health status), and less tangible measures such as “empowerment” (Coleman, 1999).

The above situation, therefore, requires a verification or confirmation and, as such, has prompted an upsurge of studies on this issue. But, despite a few of such studies, the researcher is unaware of any of them being carried out for Nigeria. To mention a few, findings of previous studies only apply to Nigeria to a very small extent because other important services, such as investment training and advise, which are important for small businesses in the Nigerian context, are missing. Another issue relates to measurement of VSLA. Previous studies based their measurements on the use of a dummy variable for participation or membership (for example: Ayango and Esipisu, 2007; Nsabagasani *et al.*, 2008; Brannen, 2010). This measurement is not appropriate as it leaves out information about the volume, depth and duration of participation. The measurement of VSLA in the current study is in two forms: the volume of participation measured by the addition of the volume of savings and loans with VSLAs and the length of participation measured by the duration of VSLA membership.

The need to assess the impact of VSLA financial services as well as their non-financial services on educational enrolment ratio of small businesses owners’ children and health status of operators in Kwara State and, consequently, address the pitfalls of existing research works in this regards, have prompted this present study to evaluate the impacts of village savings and loan associations (VSLAs) on the social wellbeing of small businesses operators.

The remainder of this paper is structured as follows: section two presents the review of literature relevant to the study, section three describes the methodology of the study, section four presents and evaluates the results of the study and section five concludes the paper.

2. Review of Literature

The section reviews related studies on the effects of VSLA on small business performance on conceptual, theoretical and empirical basis. This section also highlights the gaps in the existing empirical literature on the subject matter and how the present study is to fill these gaps.

2.1 Conceptual Issues

Microfinance Institutions (MFIs)

A microfinance institution refers to an institution providing financial services such as savings, loans and insurance to poor people living in the rural settings who are unable to obtain such services from the more formal financial sector. It serves as a proper channel through which income inequality is reduced, and citizens from lower socio-economic classes are allowed to participate in the economy (Hermes, 2014).

Village Savings and Loans Association (VSLA)

This is a variant of the Accumulating Savings and Credit Association (ASCA), which requires no external borrowing from, or donations to, the loan portfolio – it is entirely self-sufficient. Its work, therefore, falls within the informal sector. It differs from a Savings and Credit Cooperative Organization (SACCO) in that it does not receive external funding; it receives only training, and is not formally registered with the government, which allows it to operate with less formal book-keeping. Thus, it is more user-friendly for illiterate members. A VSLA allows for variable savings, unlimited savings withdrawal and loans with variable terms and flexible repayment conditions. A single association typically consists of between 15 to 30 people who save a small amount every week (Allen & Staehle, 2007).

Small and Medium Enterprise (SME)

There has been a lot of debates and arguments on the appropriate definition of an SME, thereby making any of its definition very difficult to apply from one country to another. There is no definite satisfactory definition of small and medium enterprises (Storey, 1994).

2.2 Theoretical Review

The Supply-Leading Hypothesis

The leading proponents of supply-leading hypothesis (see for example, Schumpeter, 1911; Gurley and Shaw, 1967; McKinnon, 1973; Shaw, 1973; King & Levine, 1993; Calderon & Liu, 2003) argue that it is a financial development that propels economic growth. In other words, causality runs from financial development to economic growth. This implies that the development of the financial system precedes growth of the economy.

The Demand-Following Hypothesis

The proponents of the demand-following hypothesis (Robinson, 1952; Hicks, 1969; Demetriades & Hussein, 1996), on the other hand, are not convinced that finance strengthens economic growth but contends that, rather, it is financial development that follows economic growth. They argue that growth in the real sector is responsible for financial development. Their position is that where enterprise leads, finance follows (Robinson, 1952).

2.3 Empirical Review of Literature

A number of studies have been conducted on the effect of VSLA on SME development. The literature shows that the findings of these studies are mixed in nature. For instance, Anyango and Esipisu (2007) conducted a study on VSLAs in Zanzibar where 100 current VSLA members and 30 past members were interviewed from 25 groups. Findings from the comparison VSLA participants and non-participants suggest that the VSLA members in most cases are at least as well off as the Zanzibar population and much better off than the Tanzanian population. To evaluate this study, it should be noted that even though, this study, to a large extent, has investigated how VSLA membership influenced the profitability of businesses, the analysis, however, assumed that only the financial service of VSLAs are relevant for the success of small businesses and, hence, ignored the non-financial services such as training and advice.

In a Tanzanian impact study by Brannen (2010), the sample considered by Anyango and Esipisu (2007) was used to ensure that only the most mature groups (VSLAs) and participants were included in the study in order to analyse the long-term impacts of VSLAs. The study employed ordinary least squares (OLS) method to analyse the data. Results from this study suggest that participation in VSLA has an overall positive impact on various indicators of household and individual welfare, including asset expenditure levels, the development of income generating activities (IGAs), education expenses, access to health care services, nutritional levels and quality of housing. However, in appraising this study by Brannen, it would be seen that while the study is more recent and an improvement to that of Anyango and Esipisu (2007), the study also does not provide information as to the influence of non-financial services on the performance of small businesses.

Ksoll, Lilleør, Lønborg and Rasmussen (2015) examined the impact of VSLA in Malawi for 2013-2014 period. The study employed a cluster randomized trial that investigated the impact of VSLAs in Northern Malawi over the two-year period. The study found evidence of positive and significant intention-to-treat effects on several outcomes, including the number of meals consumed per day, household expenditure as measured by the USAID Poverty Assessment Tool, and the number of rooms in the dwelling. This effect is linked to an increase in savings and credit obtained through the VSLAs, which has increased agricultural investments and income from small businesses.

Burlando, Canidio and Selby (2018) developed a theoretical model illustrating the basic trade-offs in the functioning of savings groups (SGs) of which VSLA was inclusive, and presented stylized facts derived from the

financial accounts of a sample of Ugandan SGs. The main conclusion from the theoretical model is that SGs lack a mechanism to ensure that supply of internal funds equals its demand. Consequently, SGs may be unable to generate sufficient funds to meet the demand for loans of their members. However, the study also confirms the main theoretical predictions by showing that loans are rationed for a large fraction of the lending cycle.

2.4 Conceptual Framework

Traditionally, VSLAs are motivated by the extreme lack of savings and loan facilities in rural areas. In the case of extreme poverty, where SMEs do not have capacity to access credit from formal institutions for productive purposes, VSLAs are viewed as self-managed and capitalized microfinance methodologies that alter the development equation in the marginalized communities worldwide, providing members with means to cope with emergencies, building capital and re-creating social dynamics that supported genuine self-reliance (Allen & Staehle, 2007)

Thus, the most anticipated effect of VSLAS is increase social measures of members (wellbeing) in the immediate term, but with long-term implication for productivity. The idea is that increased access to credit through savings by members could increase their economic activities and improve their well-being. Specifically, it would also increase their capacity to afford essential items, such as children school fees and health services.

3. Methodology

3.1 Model Specification

The models of this study are specified by adapting that of Brannen (2010), which is specified in econometric form as:

$$y_i = \alpha_0 + \alpha_1 VSLAm_i + \alpha_2 gen_i + \alpha_3 age_i + \alpha_4 rel_i + \alpha_5 mar_i + \alpha_6 edu_i + \alpha_7 chil_i + \alpha_8 prsav_i + \alpha_9 pracc_i + \mu_i \quad (3.1a)$$

where:

y_i is an outcome variable (such as SME development)

VSLAm is a binary variable (equal to 1 if respondent is in the treatment group, i.e. have access to VSLA, and zero if in the control group, i.e. have no access to VSLA)

gen is binary (equal to 1 for female and zero for male)

age is continuous (corresponds to the current age of respondents)

rel is non-continuous (broken down into two variables: dummy for Christianity, i.e. equal to 1 if Christian and zero if otherwise)

mar is non-continuous (broken down into four binary variables: Married, Widowed, Divorced, and Separated, while a zero in all categories corresponds to single)

edu is education (broken down into three binary variables: Primary and Secondary level, while those with no education are represented by a zero in each category)

chil is continuous (representing a respondent's current number of children)

prsav is binary (equal to 1 if respondent saved prior to joining VSLA and zero otherwise)

pracc is (equal to 1 if respondent had access to loan prior to joining VSLA and zero if otherwise)

Our own adaptation of the above is as stated below, where we also include additional factors like training and advice that are not considered in the Brannen (2010) study.

(a) Specification of the Model of Verifying the Effects of VSLA Factors on the Children’s Education

The model specification forecasting the effects of VSLA on children education enrolment is provided here. The model is in two equations: the first, which is Equation (3.1b) with VSLA volume of participation, and the second, which is Equation (3.1c) with VSLA duration of participation.

$$CEDU_i = \beta_0 + \beta_1VSLAv_i + \beta_2HHAGE_i + \beta_3HHAGE_i^2 + \beta_4HHGEN_i + \beta_5HHEDU_i + \beta_6HHZ_i + \beta_7MAR_i + \varepsilon_i$$

..... (3.1b)

$$CEDU_i = \beta_0 + \beta_1VSLAd_i + \beta_2HHAGE_i + \beta_3HHAGE_i^2 + \beta_4HHGEN_i + \beta_5HHEDU_i + \beta_6HHZ_i + \beta_7MAR_i + \varepsilon_i$$

..... (3.1c)

Where:

CEDU = Children Education (measured by the ratio of children enrolled in school to total number of children)

HHAGE = household head Age (in years)

HHGEN = Gender of household head (binary – equal 1 if male and 0 if otherwise)

HHEDU = Educational Attainment of parents (ordinal categorical variable)

HHZ = Household size (number of individuals in each respondent’s household)

MAR = Marital Status (equal 1 if still married and 0 if otherwise)

Other variables are as defined earlier

ε = unobservable factors of each household.

In line with the discussion of the models specified for this objective, the a priori expectation of each of the parameters of this model are written in inequality notations.

$$\beta_2, \beta_5 > 0; \beta_3, \beta_6 < 0 \text{ and } \beta_1, \beta_4, \beta_7 \geq 0$$

(b) Model Specification for Verifying the Effects of VSLA Factors on Health Status of Operators

The model specification of the effects of VSLA on health status of business operators is provided here. The model is in two equations: the first, which is Equation (3.2a) with VSLA volume of participation (i.e., VSLAv), and the second, which is Equation (3.2b) with VSLA duration of participation (i.e., VSLAd).

$$HLTS_i = \beta_0 + \beta_1VSLAv_i + \beta_2AGE_i + \beta_3AGE_i^2 + \beta_4GEN_i + \beta_5EDU_i + \beta_6HHZ_i + \beta_7MAR_i + \varepsilon_i..$$

.....(3.2a)

$$HLTS_i = \beta_0 + \beta_1VSLAd_i + \beta_2AGE_i + \beta_3AGE_i^2 + \beta_4GEN_i + \beta_5EDU_i + \beta_6HHZ_i + \beta_7MAR_i + \varepsilon_i.....(3.2b)$$

Where

HLTS = health status of business operators (measured by the categorical variable of health status)

and the explanatory variables are as defined earlier.

In line with the discussion of the models specified for this objective, the a priori expectation of each of the parameters of this model are written in inequality notations.

$$\beta_2, \beta_5 > 0; \beta_3, \beta_6 < 0 \text{ and } \beta_1, \beta_4, \beta_7 \geq 0$$

3.2 *Methods of Analysis*

The descriptive and inferential methods of analysis were employed in this study. The descriptive analysis entails the use of percentage and frequency distribution as tools of presenting data and the use of summary statistics as tools to present the average behaviour or characteristics of the sampled small businesses. The inferential analysis entails the use of multiple regression analysis, employing the OLS and logit method, to determine the impact of VSLA participation and other control variables (the explanatory variables) on each of the observed phenomena (the dependent variables).

Sample Size and Sampling Techniques

The study utilizes the multi-stage sampling procedure in the collection of the required data on the small businesses. A multi-stage sampling procedure is appropriate in an attempt to avoid the use of all sample units in all selected clusters (Aggresti, 2009). The first stage is purposive. This entails obtaining a list (sampling frame) of all small businesses in the selected study area. To obtain a fair representation of the study population in order to improve the validity of the study, stratified sampling will be used such that the small businesses will be stratified into homogeneous categories such as manufacturing, retailing/wholesaling (distribution), services and agro-business. For homogeneous groups, 10% of the sample is considered as representative (Aggresti, 2009). In the second stage, 493 small businesses were randomly selected through a simple random sampling method including VSLA and non-VSLA members, given that the number of small business population in rural area of the target location is unknown, the number of small businesses to be sampled was influenced by a sample size formula for infinite population in line with Godden, (2004) as stated below. This was used to arrive at a representative number of respondents.

$$SS = \frac{Z^2 p(1-p)}{M^2} \tag{3}$$

where:

SS = Sample Size for infinite population (more than 50,000)

Z = Z value (e.g. 1.96 for 95% confidence level)

P = population proportion (expressed as decimal) (assumed to be 0.5 (50%) since this would provide the maximum sample size).

M = Margin of Error at 5% (0.05)

$$SS = \frac{1.96^2 [0.6(1 - 0.6)]}{0.05^2}$$

SS = 368.79 small businesses

3.3 *Data Collection*

Data were collected from primary sources with the help of a well-structured questionnaire. A structured questionnaire was administered to various heads of small businesses in the selected Local Government Areas of Kwara State (Ilorin West, Moro and Asa) and the required data were gathered from 15th June, 2019 to 17th August, 2019 through personal administration to respondents.

4. Result and Discussion

4.1 Descriptive Analysis

The descriptive analysis of this study entails tabulations of information obtained from the survey in the form of frequency and percentage distributions and summary statistics. Qualitative information is presented in form of frequency and percentage distributions while continuous quantitative information is presented in form of mean, standard deviation, minimum and maximum values. The result of distribution analysis of each variable that was carried out with a normality test is also presented and discussed. Table 1 presents that demographic distribution of small business operators. This distribution includes gender, educational qualification, religious affiliation, marital status, and health status.

Table 1: Demographic Distribution of Small Business Operators in Kwara State

		Freq.	Percent	Cum.
Gender	Female	368	74.65	74.65
	Male	125	25.35	100
	Total	493	100	
Educational Qualification	No formal education	125	25.35	25.35
	Primary education	41	8.32	33.67
	Secondary education	212	43.00	76.67
	NCE/Diploma/ND	77	15.62	92.29
	HND/B.Sc.	38	7.71	100
	Postgraduate degree	-	-	-
	Total	493	100	
Religion	Islam	314	63.69	63.69
	Christianity	179	36.31	100
	Others	-	-	-
	Total	493	100	
Marital Status	Single	127	25.76	25.76
	Married	254	51.52	77.28
	Divorced	26	5.27	82.55
	Widowed	60	12.17	94.72
	Separated	26	5.27	100
	Total	493	100	

Source: Author's Computations.

(a) Gender Status: The result of gender distribution shows that female operators are the majority with 368 operators (approximately 74.65 percent) while male operators are 125 in numbers (approximately 25.35 percent). This reflects the typical distribution found in many North Central and South Western societies where majority of those who manage small enterprises are women (Anyanwu, 2004). This might be due to the fact that the society views women as less capable of handling big tasks than their male counterparts. As such, tasks with fewer burden are mostly assigned to women.

(b) Educational Status: Result of educational qualification distribution shows that 125 operators (about 25.35 percent) have no formal education, 41 operators (about 8.32 percent) have primary education, 212 operators (about 43.0 percent), which represent the majority, have secondary education, and 77 operators (about 15.62 percent) have either national certificate of education (NCE), national diploma (ND), or Diploma. It also shows that 38 operators (about 7.71 percent) have either higher national diploma or Bachelor of Science (B.Sc.) degree and none of the operators has a postgraduate degree. This shows that these operators are of different educational levels, which means that it is not necessarily only the uneducated that are managing small businesses.

(c) Religious Affiliations: The distribution of small business operators across religious affiliations indicates that 314 operators (about 63.69 percent) are Muslims while the remaining 179 operators (about 36.39 percent) are Christians and no operator is of any other religious affiliation.

(d) Marital Status: The distribution across marital status shows that 127 operators (about 25.76 percent) are not yet married, 254 operators (about 51.52 percent) are married, 26 operators (about 5.27 percent) are divorced, 60 operators (about 12.17 percent) are widowed, and 26 operators (about 5.27 percent) are separated. These results support the notion that majority of small business owners are of the youth age since being divorced, widowed, and separated are most likely to occur during later years.

Table 2 presents the summary statistics of small business operators' household information regarding their age, household size, number of children and ratio of children education enrolment.

Table 2: Summary Statistics of Small Business Operators' Household Information

Variable	Mean	Std. Dev.	Min	Max
Age	38.52141	12.19833	18	72
Household size	5.184312	1.942651	1	16
Children	5.052134	2.421701	0	14

Source: Author's Computations.

The result presented in Table 2 shows that average age of small business operators in Ilorin is approximately 39 years of age, with standard deviation of about 12 years, and minimum and maximum ages of 18 and 72 years respectively. Average household size of small business operators in Ilorin is approximately 5 individuals, with standard deviation of about 2 persons, and minimum and maximum number of persons in a household are 1 and 16 individuals respectively. Average number of children in a household is about 5, with standard deviation of 2 children. The lowest number of children that can be found in these household is 0 and highest is 14.

Inferential Analysis

Table 3: Estimates of VSLA and Children Education Enrolment Ratio and Health Status

VARIABLES	Children Enrolment Ratio						Health Status					
	Estimates of Equation (3.1b)			Estimates of Equation(3.1c)			Estimates of Equation (3.2a)			Estimates of Equation (3.2b)		
	Coeff.	t-stat	p-val	Coeff.	t-stat	p-val	Coeff	t-stat	p-val	Coeff	t-stat	p-val
VSLAv	0.003	0.62	0.537	-	-	-	0.002	0.09	0.931	-	-	-
VSLAd	-	-	-	0.018	1.25	0.212	-	-	-	0.080	0.89	0.374
AGE	0.069	6.69	0.000	0.067	6.55	0.000	0.112	1.29	0.197	0.121	1.42	0.156
AGE-squared	-	-	0.000	-	-	0.000	-	-1.3	0.179	-	-	0.155
	0.0008	8.21		0.0008	8.11		0.001			0.002	1.42	
GEN	0.071	1.6	0.110	0.073	1.67	0.095	0.340	1.26	0.206	0.378	1.39	0.164

EDU	0.021	1.24	0.215	0.017	1.0	0.318	0.158	2.04	0.042	0.165	2.27	0.023
HHZ	0.027	3.03	0.003	0.026	2.93	0.004	0.156	3.87	0.000	0.168	3.79	0.000
MARm	0.457	7.2	0.000	0.455	7.22	0.000	-	-3.7	0.000	-	-	0.000
							1.196			1.206	3.76	
MARw	0.147	2.2	0.028	0.140	2.1	0.036	-	-3.8	0.000	-	-	0.000
							2.166			2.116	3.71	
MARd	0.732	9.91	0.000	0.717	9.51	0.000	-	-3.3	0.001	-	-	0.001
							2.078			2.025	3.21	
MARs	0.611	6.75	0.000	0.606	6.57	0.000	-	-3.6	0.000	-	-3.5	0.000
							1.867			1.834		
Constant	-1.430	-	0.000	-1.384	-6.3	0.000						
		6.19										
Observations	493			493			493			493		
R-squared	0.465			0.467			0.089			0.132		
F-statistic	140.6			135.6			133.8			134.3		
p-value	0.000			0.000			0.000			0.000		

Source: Author's Computations

Note: VSLAv is volume of VSLA participation measured by savings plus loan, VSLAd is length of period being a member of VSLA, AGE is age of household head in business operator's household, GEN is a dummy variable of male-gender household head in business operator's household, EDU is education level of household head in business operator's household, HHZ is business operators' household size, MARm is married marital status, MARw is widowed marital status, MARd is divorced marital status, MARs is separated marital status. The estimates reported in the first 2 panels are for Equations (3.1a) and (3.1b) for the education enrolment of VSLA members' children versus non-member' children while those reported in the last 2 panels are for Equations (3.2a) and (3.2b) on the health status of the VSLA members versus non-member

VSLA and Education Enrolment Ratio

The dependent variable here is the ratio of the number of children in school to total number of children in small businesses operators' households. The independent variables in this model are volume and duration of VSLA participation, age, age-squared, gender, education, household size, and marital status (which are married, widowed, divorced and separated).

(a) Diagnostic and Robustness Statistics

The R-squared reported in the table has a value of 0.465 and 0.467 respectively for the models with VSLA volume and duration. This indicates that about 46.5 and 46.7 percent of variations in children education enrolment in small business operators' households are explained by the two models. The result indicates that the models are statistically significant judging from the F-statistic values of 140.6 and 135.6, respectively, and very low p-values of 0.000 each. This implies that the overall models have good fit, despite the fact that only modest variations in the dependent variable are explained by the variations in the explanatory variables.

The VIF results presented for educational enrolment ratio show that the VIF values are quite small for all other variables except age and its squared term. A small value of VIF below 10 is considered necessary for absence of problematic multicollinearity in the model. High VIF values exhibited by age and its square (i.e. AGE and AGE²) is simply due to quadratic relationship, which is not linear. Such high VIF values can be safely ignored since they do not affect the statistical properties of the variables (Asteriou & Hall, 2016). It can, therefore, be safely concluded that the models are free of problematic multicollinearity. The non-normality of residuals test result shows that the Jarque-Bera test statistic for normality is quite low (a value of 1.12, with p-value 0.631), which provides no

sufficient evidence to reject the null hypothesis of normality of residuals. This implies that the residuals of the models are normally distributed.

Having evaluated the diagnostic statistics, the discussion now proceeds to the evaluation of the specific explanatory variables. This present study is not aware of any previous studies that attempted to model the children education enrolment function for SMEs operators that are members of a SHG, including VSLA. As a result, there are no previous studies to compare the findings of the present study with.

Evaluation of Performance of VSLA Explanatory Variables

In line with the models of Equations (3.1b) and (3.1c) in Section 3, there are two VSLA explanatory variables whose effects on children education enrolment are described by the estimates in the above Table 3. These are the volume of savings with loans from VSLAs (viz: VSLAv) and the duration of membership with VSLAs (viz: VSLAd) and their specific performances are as evaluated in paragraphs (a) and (b) below.

(i) Volume of Business with VSLA (VSLAv): VSLA volume is a continuous variable of loan plus savings participation. Its positive coefficient of 0.003 (with p-value of 0.537) indicates that it does not affect education enrolment of children in small business operators' households. This insignificant effect signifies that the benefit of having more financial resources for adequate education level associated with having high volume of saving with VSLAs is eroded by the cost incurred in the reduction of household expenditures in an attempt to meet the usually over ambitious savings target. This means that the net effect of being a long time member off VSLAs is therefore zero.

(ii) Duration of VSLA Participation (VSLAd): VSLA duration is a categorical variable of the length of participation with VSLA. Its positive coefficient value of 0.018 (with p-value of 0.212) indicates that it does not affect education enrolment of children in small business operators' households. This simply implies that the proportion of children that would be enrolled into formal education in small business operators' households is not determined by the business operators' duration of participation in VSLA. This insignificant effect signifies that the benefit of having more financial resources for adequate education level associated with having long time relation with VSLAs is eroded by the cost of incurred in the reduction of household expenditures in an attempt to meet the usually over ambitious savings target. This means that the net effect of being a long time member off VSLAs is, therefore, zero.

VSLA and Health Status of Small Businesses Operators

To achieve the objective of examining the impact of VSLA on the health status of small business operators, ordinal logit regression models – as specified in Equations (3.2a) and (3.2b) of Section 3 – were estimated and then presented in Table 3. The dependent variable is health status of small businesses operators measured in ordered categorical variable reflecting their quality of health. The independent variables in this model are volume and duration of VSLA participation, age, age-squared, gender, education, household size, and marital status (which are dummy variables married, widowed, divorced and separated).

(a) Diagnostic and Robustness Statistics

The pseudo R-squared reported in the table has a value of 0.089 and 0.132 respectively for the models with VSLA volume and duration explanatory variables. This indicate that about 8.9 and 13.2 percent of variations in health status of small business operators are explained by the two models. The result indicates that the R^2 values are statistically significant judging from the F-statistic values of 133.8 and 134.3, respectively, and very low p-values of 0.000 each. This implies that the overall models have good fit, despite the fact that only small variations in the dependent variable are explained by the variations in the explanatory variables.

Having evaluated the diagnostic statistics, the discussion now proceeds to the evaluation of the specific explanatory variables. The present study is not aware of any previous studies that attempted to model the children

education enrolment function for SMEs operators that are members of a SHG, including VSLA. As a result, there are no previous studies to compare the findings of the present study with.

Evaluation of Performance of VSLA Explanatory Variables

(i) Volume of Business with VSLA (VSLAv): VSLA volume is a continuous variable of loan plus savings participation. Its positive coefficient of 0.002 (with p-value of 0.931) indicates that it does not affect health status of small business operators. The insignificance of the coefficient of this variable implies that increased volume of transactions with VSLA will leave the health status of small business operators unaltered. This may be as a result of the negative counter-effect of working extra-hours on health status as the volume and benefit from VSLA increases, as well as the counter-effect of the reduction in household expenditures on health in an attempt to meet the overly ambitious saving targets.

(ii) Duration of VSLA Participation (VSLAd): VSLA duration is a categorical variable of the length of participation with VSLA. Its negative but statistically insignificant coefficient of -0.080 (with p-value of 0.374) indicates that it does not affect health status of small business operators. The statistical insignificance of the coefficient of this variable implies that an increase in the length of time of dealing with VSLA leaves the health status of small business operators unchanged. This may also be as a result of the negative counter-effect of working extra-hours and over-working oneself on health status as the benefit accrue to long-time members of VSLA increases, as well as the counter-effect of the reduction in household expenditures on health in an attempt to meet the overly ambitious saving targets.

5. Conclusion and Recommendation

On the whole, this empirical research reveals that VSLAs' financial and non-financial services greatly influence the performance of small businesses despite the fact that these services have contributed little or nothing to the social wellbeing of small business operators and their household members.

Therefore, the benefit of increase in the volume of transaction and length of dealing with the VSLAs leaves the education enrolment of children in small business operators' household and the health status of small business operators unaltered due to the counter-effect of the reduction in household expenditure in an attempt to meet up with the over ambitious saving target of the VSLAs. The study then recommends that policy makers should make painstaking effort to enlighten small business operators to exercise cautions in meeting the over ambitious saving target of VSLAs saving activities as this does not affect their household welfare condition in any significant way, in line with the findings of this study.

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