

The extent to which financial services provided by World Vision Rwanda through VSLA project contributes to the household's livelihood for poverty reduction process in Gasaka Sector, Nyamagabe District

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Abstract

The research study was conducted in the Southern Province of Rwanda, Nyamagabe District, Gasaka Sector under the topic assessment of effect of non-government organization financial services projects on poverty reduction in Rwanda: for the case of world vision's village savings and loan association in Gasaka sector, Nyamagabe district. The purpose of the research was to assess the effect of Non-governmental organization intervention on improving household livelihood of the community of Nyamagabe District with highlighting on its intervention area Gasaka Sector. The research used mix methods including descriptive survey design with 98 respondents composed of 93 World Vision Rwanda beneficiaries of VSLAs project, 3 local authorities and 2 WVR leaders. The data was analyzed using IBM SPSS version 20.0. The results were harmonized by focus groups' discussions with beneficiaries and field observation. The questionnaire was the main tool to collect information, and interview. The findings revealed that the socio-demographic of World Vision beneficiaries were dominated by females; age ranged of adult's people from 36-65 years old, family size of

4-6 members, the married people, the education level was primary studies and the majority were occupied by agriculture. The extent to which financial services provided by World Vision Rwanda through VSLA project contributes to the household's livelihood for poverty reduction process in Gasaka Sector. This were demonstrated by payment of school fees and material for children (39.8%), payment of medical insurance (44.1%), improved feeding at home strongly (57%), eliminating malnutrition diseases at home (49.5%), improved clothing (45.2%), improved agricultural and livestock harvest (50.5%) and increased savings (49.5%). The household improved by building a new house (46.2%), repaired the old house (39.8%), cementing the house (47.3%), construction of modern toilet (35.5%), installation of electricity in their house using Mobisol company (51.6%) and installing drinking water at home (36.6%). The affordable assets through VSLAS project presented were: mattress (66.7%), radio (66.7%), TV (60.2%), Mobile phone (87.1%), land (79.6%) and forest (78.5%). There was also the economic development via intervention of World Vision through VSLAs project. The findings highlighted that respondents purchased land (47.3%),

farming of livestock (50.5%), modern house for habitation (60.2%), ease to pay school fees (47%), access to medical insurance (52.7%) and they were able to pay loan (53.8%). In addition, national policies with a purpose of poverty reduction strategies should be made applicable to NGOs in general, and Government of Rwanda should continue to assist them in contributing not just to household livelihoods but also to growth paradigms.

1. Introduction

Recently, one billion of the world's seven billion individuals live in avoidable extraordinary poverty. Inside a lonely generation, the earth will be occupied by nine billion individuals, and 90 percent of the additional two billion occupants are probably going to be naturally born into poverty. The challenge of our generation is to discover approaches to change that likelihood (Maes, 2016). Hence, different organization should intervene for this circumstance.

Globally, microfinance services have Generally focusing on supplying credit to help small businesses grow. Savings builds assets and can help to resolve risks as well as planned lifecycle events, according to growing data. Savings is a much higher priority for disadvantaged households than investing, as savings builds assets and can help to address risks as well as planned lifecycle events (Care, 2016). Non-government organization (NGOs) have become an exceptionally mainstream part on the planet and in Rwanda particularly, inside the most recent decade of our popularity-based administration. To many, they are seen as the most consistent organizations through which poverty is tended to. Social, financial and education improvement, joblessness, poverty and disparity are the typical of issues normally tended to by the activities of the non-government organization. This part comprises of organizations, not at all reliant on either, the general population or private sector (Asha, 2013).

Of late, creating measures of development reserves have been coordinated to and through NGOs taking all things together domains. Furthermore, NGOs attempting to improve social government assistance for their population (social welfare), and create common society have gotten progressively dependent on all-inclusive givers, inciting a risky improvement in neighborhood NGOs in various countries including Rwanda (Mutsindashyaka, 2016).

However, World Vision and Care International are using the Village Savings Loans Associations (VSLAs) initiative to help low-income earning households in mission to alleviate poverty. This is being done in order to avoid causing dependence among those families and to assist them in promoting a culture of saving and borrowing while they continue to support the NGOs' interventions in order

to have a positive effect on project success (Uwase, Ndabaga&Oduor, 2015).

As indicated by Patel *et al.*, (2014) notwithstanding the formative role that underscores the presence of NGOs, deliberate organizations assume a significant role in complementing governmental efforts in addressing human needs and hence reinforcing social equality. She is likewise of the view that community approach towards social improvement partnership is a feasible choice in middle income nations confronted with resource requirements and constrained institutional ability to address human issues.

NGOs in Ethiopia, Somalia, Kenya, Rwanda, Burundi, Uganda, Tanzania, Zambia, Zimbabwe, Mozambique, Swaziland, and South Africa, to name a few African countries. NGOs across Africa as well as numerous different landmasses are engaged with work running from giving human services like health care to capacity to strengthen efforts (Lubbadet *al.*, 2016).

In Rwanda, NGOs were progressively associated with financial services commonly socio-economic of the population of society. As the improvement talk inclines towards creating abilities and instruments for reinforcing society, NGOs have responded accordingly (UNDP, 2014). Rwanda's most recent information given out in 2011 show massive improvement in the expectations for everyday comforts of residents over past years including poverty reduction, and progress towards the Millennium Development Goals (MDGs) among others (Nyandekwe, Kakoma&Nzayirambaho, 2018). Inside this system, Rwanda has called upon a few accomplices to help it accomplish the maintainable development included World Vision Rwanda. In this way this work centered on investigating the effect of the World Vision Rwanda toward poverty reduction including improving family socio-economic and community welfare in government assistance of its beneficiaries through village savings loan association project in Gasaka Sector, Nyamagabe District. However, the rural community's social and economic impact is still debatable, posing concerns about why the VSLA project was implemented in Gasaka Sector. Thus, the researcher found this as a knowledge gap of the study. The researcher wants to know the family status of the beneficiaries before the intervention of the World Vision Rwanda through introduced VSLAs project.

Therefore, under financial service delivered under VSLAs project the Rwandan's people to be familiarized by WVR as well as they frequently miss understood the loan utilization for economic development from microfinance institutions under the found of WV. In response WVR adopted by VSLAs as a demonstration initiative for economic empowerment in Gasaka Sector.

coordinated decision-making; and rural households have been viewed as the center of rural life at the same time. New definitions of the household allow for overlapping social groups, as well as families or other partners that may be physically apart but are also socially connected (Senadza, 2014).

As indicated by the research, a household has been considered as a group of persons living together sharing all circumstances of life in the area of research. Due to Rwanda historical background a household may be composed of individuals who share the same descendants but who can even live together with other relatives.

Socio-economic status concern not only income but also learning success, economic security, subjective knowledge of social category and status. The statistics for families with kids under 18 years old with source of revenue categorized them into poverty class comparatively inauspicious. Any national meeting during which complete data was available showed an increase in the poverty rate from 2000 (12.7 percent) to 2008 (15.7 percent), but the difference between groups was different. In 2000, 7.7% of White families with children lived in poverty, compared to 25.3 percent of African American and 23.3 percent of Hispanic families with children who lived below the poverty line. By 2008, 9.3 percent of White families, 29.6 percent of African American families, and 26.8% of Hispanic families had grown (Rand *et al*, 2011).

Socio-Economic Status refers to the standard of living as well as the possibility of exercising human rights in society (Karklins & Mendoza, 2016). Poverty is usually not a single symptom, but rather a set of significant and psychosocial stressors.

Furthermore, SES is a responsible and dependable predictor of an infinite assembly of outcomes crosswise the life reserve, commonly with mental and physical healthiness (Ogbedebi, 2017). For instance, Revenue of African American family was at the rate of 56.0% of White family revenue in 1990 related to 56.9% in the year of 2008. Consequently, SES is important to all dominions of behavioral and the public discipline.

3. Materials and Methods

The researcher used a descriptive survey design and to evaluate the effect of financial services provided by World Vision Rwanda through VSLA project contributes to the household's livelihood for poverty reduction process in Gasaka Sector. In order to describe the situation with qualitative and quantitative approaches, as it was carried out in a natural setting, so as to yield the highest information with the least expenses of effort within money and time (Mualuko, Mbabazi, & Shukla, 2016). The method has been selected because of being precised as well as corrected and was used to describe events with awareness designed approach (Mualuko, Mbabazi, & Shukla, 2016).

This research targeted the population located in Gasaka Sector that directly benefit from the World Vision Rwanda VSLAs members. Therefore, the targeted population is composed into two kinds: Direct beneficiaries of VSLAs project, and leaders. Direct beneficiaries were those households that have been benefiting the World Vision Rwanda VSLA project within the year of 2017 and afterward the local and WVR leaders, the target population covered 2,248 households in total. The following table presented clearly the targeted population distribution.

Table3. 1: Distribution of household within VSLAs project of Gasaka sector

No	Cells	Total households and population
1	Kigeme	403
2	Nyamugari	344
3	Remera	379
4	Nzega	351
5	Ngiryi	365
6	Nyabivumu	406
	Total	2248

Source: WVR, 2018, Gasaka sector report, (2018)

Table3. 2: Distribution of target population for leaders

No	Target	Total
1	Local leaders Officials	18
2	WVR/Gasaka officials	12
Total		30

Source: Researcher compilation (June, 2021)
 Therefore, the researcher contacted each category of beneficiaries from the stated above tables so that each category be represented to get an overview of all targeted population in order to get the contribution of WVR VSLA project on improving household livelihood and community welfare.

As indicated by Mualuko, Mbabazi, and Shukla, (2016), a sample size is a subset of the overall population that is used to represent the target population's traditional or general viewpoints. Sample is a purposeful selected number of individuals who are able to provide the data from which you will depict conclusions regarding some larger group that people represent. To explore contribution of World Vision Rwanda VSLA Project on improving the livelihood of Gasaka Sectors, the sampling processes involved three different categories including direct beneficiaries of VSLA project, local authorities, and official's leaders of World Vision. The target households were 2,278 in total.

Therefore, it was very difficult to question and study the facts from the whole population aimed at the research study. That is why there was a need to make the choice of the sample of the people.

To determine the sample size, the research was employed the method of Alain Bouchard, so as to illustrates that a general population below 1,000,000 persons, the sample can be able 96 with an implicit

error of 10% as well as 90% of accuracy (Mualuko, Mbabazi, & Shukla, 2016). Then, the next figures could present the sample determination:

N = the population size is 2248 households

N0: Sample size when the population size went towards unlimited is 96

NC: Determined sample size

$$NC = \frac{N \times NO}{N + NO} = \frac{2248 \times 96}{2248 + 96} = 92.03 \approx 93,$$

Hence, a determined sample size is 93 individuals.

In this illustration, ninety-two (93) respondents among 2248 households were the direct beneficiaries of the World Vision Rwanda was randomly selected and studied and the purposive sampling for local authorizes and WVR officials were five (5) and the sample size to be used was 98 individuals in total. To pull together the quantitative and qualitative data, prepared questionnaires was managed by ninety-eight (98) at random selection in total of 2246 direct beneficiaries of VSLA project and 30 local authorities and WVR official leaders.

The calculation of each category sample size:

$$ss = \frac{Ndb \times Nts}{N} \quad \text{where: } ss : \text{Sample size, Ndb: number of direct beneficiaries, Nts: number of total size, N: total number of population study.}$$

Table3. 3 Sample determination of quantitative approach

Cells	Direct beneficiaries	Sample size	Type of sampling
Kigeme	403	16	Purposive sampling
Nyamugari	344	14	Purposive sampling
Remera	379	16	Purposive sampling
Nzega	351	14	Purposive sampling
Ngiryi	365	15	Purposive sampling
Nyabivumu	406	18	Purposive sampling
Total	2248	93	Purposive sampling

Source: Researcher, (2021)

Table3. 4 Sample determination for qualitative approach.

No	Target	Total	Sample size	Type of sampling
1	Local leaders Officials	18	3	Purposive sampling
2	WVR/Gasaka officials	12	2	Purposive sampling
Total		30	5	

Source: Researcher (2021)

4. Results and Discussion

This chapter presented socio-demographic characteristics of respondents, study findings, and

discussion. All findings are presented according to the objectives of research project.

4.1 Socio - demographic characteristics of respondents

This section of socio-demographic characteristics indicated the frequencies of socio-demographic characteristics especially sex, age, marital status,

education, occupation, family size and number of educated persons in family.

4.1.1 Gender of Respondents

The frequencies indicating the gender of respondents are presented in the Table 4.1.

Table4. 1 Sex of respondents

Variables	N(%)	Mean	SEM	STD
Males	26(28)			
Females	67(72)	1.72	0.047	0.451
	93(100)			

Source: Primary data, (2021)

Table 4.1, indicated the gender of respondents and males were represented by 28% of respondents while females were 72% of respondents.

4.1.2 Marital Status of Respondents

The Table 4.2, highlights the marital status of respondents.

Table4.2 Marital Status of Respondents

Variables	N(%)	Mean	SEM	STD
Single	27(29)			
Married	43(46.2)	2.10	0.101	0.979
Divorce	10(10.8)			
Widow/er	13(14)			
	93(100)			

Source: Primary data, (2021)

As indicated in the Table 4.2, the marital status of respondents. Single Respondents was 29% of respondents, married was 46.2% of respondents, divorced was 10.8% of respondents and widow/er was 14% of respondents.

4.1.3 Age of Respondents

To highlight the age of respondents Table 4.3 was employed.

Table4. 3 Age of Respondents

Variables	N(%)	Mean	SEM	STD
Youth (18-35)	31(33.3)			
Adult (36-65)	42(45.2)	1.88	0.076	0.735
Older (>65)	20(21.5)			
	93(100)			

Source: Primary data, (2021)

The group of age is presented in the Table 4.3. The youth (18-35 years) was 33.3%, the adults (36-65) was 45.2% and the old persons over 65 years old was 21.5% of respondents.

4.1.4 Education of Respondents

The education level is highlighted in Table 4.4.

Table4. 4 Education of Respondents

Variables	N(%)	Mean	Std EM	STD
None/Illiterate	18(19.4)			
Primary	34(36.6)	2.29	0.122	1.176
Secondary	21(22.6)			
hand crafts(TVET/VTC)	20(21.5)			
Total	93(100)			

Source: Primary data, (2021)

Table 4.4 indicated that 19.4% of respondents was illiterate, 36.6% of respondents was finished primary studies, 22.6% of respondents was studied secondary schools and 21.5% of respondents studied the hand crafts.

4.1.5 Family size of Respondents

Family size was described by respondents in the Table 4.5.

Table4. 5 Family Size of Respondents

Variables	N(%)	Mean	Std Error Mean	Std
1 member	21(22.6)			
1-3 members	19(20.4)			
4-6 members	53(57)	2.34	0.086	0.827
Total	93(100)			

Source: Primary data, (2021)

Table 4.5 indicated that 22.6% of respondents had 1 member, 20.4% of respondents had 1-3 members and 57% of respondents had 4-6 members of family.

4.1.6 Educated persons in the family of Respondents

Number of persons educated in the family of respondents was highlighted in Table 4.6.

Table4. 6 Number of Educated Persons in Family

Variables	N(%)	Mean	Std Error Mean	Std
One member	31(33.3)	2.18	0.111	1.073
1-3 members	29(31.2)			
4-6 members	18(19.4)			
Total	93(100)			

Source: Primary data, (2021)

Table 4.6 indicated that 33.3% of respondents shown that there was one member educated in the family, 31.5% of respondents presented that 1-3 members was educated and 19.4% of respondents shown that 4-6 members was educated.

4.1.7 Occupation of Respondents

The occupations of respondents were highlighted in the Table 4.7.

Table4. 7 Occupation of Respondents

Variables	N(%)	Mean	Std Error Mean	Std
Farmers/breeder	41(44.1)	2.04	0.113	1.093
Public servant	19(20.4)			
Trader	21(22.6)			
Unemployed	12(12.9)			
Total	93			

Source: Primary data, (2021)

Table 4.7 indicated that there were different occupation in study area, 44.1% of respondents were occupied by farmers/breeders, public servant were 20.4% of respondents, traders were occupied by 22.6% of respondents and unemployed were occupied by 12.9% of respondents.

The extent determination about finance services provided by WV_R through VSLA project including

improving people welfare, Financial services run after introduction, Improved house for household and getting Affordable assets.

The Table 4.8 presented the various household situation about welfare improvement of the people through VSLAs project.

Table4. 8 Welfare improvement through WV VSLA project

Statement	Strongly Disagree	Disagree	Not Sure	Agree	Strongly Agree
Paying school fees and materials for children	3(3.2)	6(6.5)	28(30.5)	19(20.4)	37(39.8)
Paying medical insurance fees (mutuelle de santé)	4(4.3)	8(8.6)	24(25.8)	16(17.2)	41(44.1)
Improved feeding at home		12(12.9)	21(22.6)	7(7.5)	53(57)
Eliminating malnutrition diseases at home	31(33.3)	3(3.2)	13(14)	46(49.5)	
Improved clothing	29(31.2)		17(18.3)	5(5.4)	42(45.2)
Enhance capability to contributing to festivity/ funerals for neighbors		1(1.1)	9(9.7)	37(39.8)	46(49.5)
Improved agricultural and livestock harvests			14(15.1)	47(50.5)	32(34.4)
Increased savings		13(14)	13(14)	46(49.5)	21(22.6)

Source: Primary data, (2021)

As presented in Table 4.8, welfare improvement justified by different indicators including payment of school fees and material for children strongly agreed (39.8%), payment of medical insurance strongly agreed (44.1%), improved feeding at home strongly agreed(57%), eliminating malnutrition diseases at home agreed (49.5%), improved clothing strongly

agreed(45.2%), enhance the capability to contribute to festivity/funerals for neighbors strongly agreed(49.5%), improved agricultural and livestock harvest agreed (50.5%) and increased savings agreed(49.5%).

The next table shown financial services run after introduction of VSLA project.

Table4. 9 Financial Services run after intervention of VSLAs project

Statement	Strongly Disagree	Disagree	Not Sure	Agree	Strongly Agree
Modern Agriculture	4(4.3)	5(5.4)	18(19.4)	17(18.3)	49(52.7)
Modern livestock		8(8.6)	12(12.9)	23(24.7)	50(53.8)
Small business (petit commerce)		8(8.6)	16(17.2)	10(10.8)	59(63.4)
Selling Meet you and mobile money	3(3.2)	36(38.7)	5(5.4)	49(52.7)	
Kiosk	5(5.4)		17(18.3)	42(45.2)	29(31.2)
Bar		1(1.1)	5(5.4)	41(44.1)	46(49.5)
Transport through bicycle/moto		39(41.9)	13(14)	41(44.1)	
Agriculture & Livestock		16(17.2)	14(15.1)	32(34.3)	31(33.3)

Source: Primary data, (2021)

For the findings presented within table 4.9 indicated that after intervention towards WV VSLAs project there were several financial services adopted by the WV VSLAs project beneficiaries. These financial services are: Modern agriculture were strongly agreed at the rate of 52.7%, modern livestock

strongly agreed (53.8%), small business (63.4%), mobile money services agreed by 52.7% of respondents, Kiosk agreed by 45.2% of respondents, bar strongly agreed by 49.5%, transport through bicycle/moto agreed by 44.1% and 34.3% of respondents reported that were agreed that they started the agriculture and livestock.

The next table presented improved house for household through VSLAs project

Table4. 10 Status of improved house via WV VSLAs project

Statement	Disagree	Not Sure	Agree	Strongly Agree
Building a new house	35(37.6)	11(11.8)	43(46.2)	4(4.3)
Repairing the old house	12(12.9)	16(17.2)	28(30.1)	37(39.8)
Cementing the house	30(32.3)	9(9.7)	44(47.3)	10(10.8)
Constructing a modern toilet	14(15.1)	16(17.2)	30(32.3)	33(35.5)
Installing electricity at home (Mobisol)	33(35.5)	1(1.1)	48(51.6)	11(11.8)
Installing water at home	9(9.7)	17(18.3)	33(35.5)	34(36.6)
No improved housing	58(62.4)	1(1.1)	26(28)	8(8.8)

Source: Primary data, (2021)
 Table 4.10 indicated that the house of VSLAs project beneficiaries have improved. 46.2% of respondents agreed that they built a new house, 39.8% of respondents strongly agreed that they repaired the old house, cementing the house has done as agreed by 47.3%, construction of modern toilet strongly agreed by 35.5%, installation of electricity in their house using Mobisol company agreed by 51.6%, installing the water at home strongly agreed by 36.6% and over a half of participants disagreed that there was no improved housing (62.4%).
 The next table presented Affordable assets through VSLAS project.

Table4. 11 Affordable assets via intervention of WV VSLAs project

Statement	Disagree	Not Sure	Agree	Strongly Agree
Mattress	8(8.6)	5(5.4)	18(19.4)	62(66.7)
Radio	10(10.8)	5(5.4)	16(17.2)	62(66.7)
TV	14(15.1)	9(9.7)	14(15.1)	56(60.2)
Mobile phone			12(12.9)	81(87.1)
Land	2(2.2)	4(4.3)	13(14)	74(79.6)
Forest	8(8.6)		12(12.9)	73(78.5)

Source: Primary data, (2021)
 Table 4.11 highlighted the affordable assets of WV VSLAs project beneficiaries processed after its intervention. The findings indicated that all interviewed persons were strongly agreed that they had mattress (66.7%), radio (66.7%), TV (60.2%), Mobile phone (87.1%), land (79.6%) and forest (78.5%).
 The next table presented the challenge of VSLAs project during implementation.

Table4. 8 Challenges of VSLAs project during implementation

	Strongly Disagree	Disagree	Not Sure	Agree	Strongly Agree
Failure to re pay back the loan	17(18.3)	5(5.4)	14(15.1)	17(18.3)	40(43)
Delay in repayment	33(35.5)	41(44.1)	3(3.2)		16(17.2)
High risky safety of savings		26(28)	9(9.7)	58(62.4)	
External support that are not equally shared		74(79.6)	16(17.2)	3(3.2)	
Lack of strict applications of internal rules and regulations		13(14)	9(9.7)	17(18.3)	54(58.1)

Source: Primary data, (2021)

Table 4.12 indicated that respondents within rate of 43% are strongly agreed that there was a failure to repay back the bank loan but 44.1% of respondents disagreed about delaying in repayment. There was high risky safety of saving as agreed by 62.4% of respondents. External report that are not equally

shared disagreed by 79.6% of respondents but lack of strict applications of internal rules and regulations strongly agreed by 58.1% of respondents. The next table presented increased income thought VSLAs project in Gasaka Sector.

Table4. 93 Indicators of increased income via WV VSLAs project in Gasaka Sector

Statement	Disagree	Not Sure	Agree	Strongly Agree
Land purchasing	12(12.9)	11(11.8)	26(28)	44(47.3)
Livestock farming	3(3.2)	11(11.8)	32(34.4)	47(50.5)
Modern house for habitation	9(9.7)	6(6.5)	22(23.7)	56(60.2)
Easy to pay school fees	5(5.4)	4(4.3)	40(43)	44(47.3)
Access to medical insurance			49(52.7)	44(47.3)
Able to pay bank loan	6(6.5)	2(2.2)	35(37.6)	50(53.8)

Source: Primary data, (2021)

Table 4.13 indicated how the households increased the income via WV VSLAs project. The respondents purchased the land as strongly agreed by 47.3%, livestock farming strongly agreed by 50.5%, 60.2% of respondents strongly agreed that they had modern house for habitation, the respondents were strongly agreed that they were easy to pay school fees (47%), access to medical insurance agreed by 52.7% and 53.8% of respondents strongly agreed that were able to pay loan.

Analysis of Variance (ANOVA)

The degree to which financial services offered by World Vision Rwanda through the VSLA project contribute to the household's wellbeing for the

poverty reduction phase in Gasaka Sector was determined using an investigation. This was demonstrated by different variable including medical insurance, affordable asset, improved house and increased income of household which was depended on the WV VSLAs project intervention in Gasaka Sector in purpose of poverty reduction. In addition, to change social category (ubudehe) through the intervention of WV VSLAs project indicating the level of poverty reduction of households. Tables 4.14 and Table 4.15 indicating the summary model and ANOVA respectively about the extent of financial services provided by WV VSLAs project to contribute household's poverty reduction.

Table4. 10 Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.934 ^a	0.873	0.867	0.309

a. Predictors: (Constant), Increased income, Improved house , Affordable assets, Medical insurance/mutuelle

Source: Primary data, (2021)

The model overview is an important study that shows how well the overall model works and how well the indicator, financial services after the WV VSLAs project action, will forecast poverty reduction in households in the Gasaka Sector. In our case the prediction indicated that R = 0.934 thus $r^2 = 0.873$, is 87.3%. Thus the correlation measurement is equal to 87.3%.

The R square calculation showed how accurately the predictors predicted the result, so it is preferable to use the modified R square to get a more precise measurement (86.7 percent). The estimate's standard error is then equivalent to 30.9 percent.

Table4. 15 Analysis of variance (ANOVA)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	57.561	4	14.390	150.821	0.000 ^b
	Residual	8.396	88	.095		
	Total	65.957	92			

Predictors: (Constant), Increased income, Improved house, Affordable assets, Medical insurance/mutuelle

Source: Primary data, (2021)

Table 4.15 indicated that $F(4, 88) = 150.821$ and P-value is .000. ANOVA is labeled in the output box above (Analysis of Variance). What's interesting

here is the F test result, which provides a measure of the model's absolute fit to the results. The F test result is marginally meaningful ($p=0.01$), indicating that the model fits the results. A linear relationship is depicted by a straight line, which describes the relationship between these four variables.

Table4. 11 Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	4.714	.372		12.664	.000
	Medical insurance/mutuelle	.114	.041	.161	2.758	.007
	Improved house	.224	.043	.258	5.255	.000
	Affordable assets	.053	.050	.059	1.075	.285
	Increased Income	.516	.064	.578	8.033	.000

a. Dependent Variable: Intervention of WV VSLAs project

Source: Primary data, (2021)

Since the coefficient of correlation just indicates that there is an association between the two variables, it does not reveal the nature of the relationship between the four variables. As a result, regression method was used to analyze the type of relationship that exists between financial resources and household livelihood in the Gasaka Sector for the purpose of poverty reduction. The regression line will be used to understand the functional relationship between the four variables under investigation.

$$PR = a + bMI + cIH + dAA + eEd + \text{Error}$$

Where, **PR**: Poverty reduction, **MI**: Medical Insurance, **IH**: Improved house, **AA**: Affordable Assets and **Ed**: Economic Development and the constants are: a, b, c, d and e

To create a functional relationship between the four variables, we must first determine the

values of constants and then plug them into the above equation.

Therefore,

$$PR = 4.714 + 0.114MI + 0.224IH + 0.053AA + 0.516Ed$$

(Where: MI: Medical Insurance, IH: Improved house, AA: Affordable Assets and Ed: Economic development).

From this regression analysis, there was a strong and statistical significant between financial services provided by World Vision Rwanda through VSLAs project contributed to the household's livelihood for poverty reduction process in Gasaka Sector.

The determination the extent to which financial services provided by World Vision Rwanda through VSLA project contributes to the household's

livelihood for poverty reduction process in Gasaka

Sector measured by social category change. I

Table4. 17 Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.643 ^a	.413	.407	.479

a. Predictors: (Constant), Social category (ubudehe) after intervention of WV VSLAs project

Source: Primary data, (2021)

Table 4.17 indicated the model summary and how overall model fits the predictor. Ubudehe categorization after intervention of WV Rwanda is able to predict the reduction process of the poverty. To change class of Ubudehe category from worse

category to the better category is able to predict the reduction of poverty process to improved life status. This is demonstrated by R indicating correlation which is equal to 64.3%.

Table4. 18 Analysis of Variance (ANOVA)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	14.709	1	14.709	64.034	.000 ^b
	Residual	20.904	91	.230		
	Total	35.613	92			

a. Dependent Variable: Social category before intervention of WV VSLAs project

b. Predictors: (Constant), Social category after intervention of WV VSLAs project

Source: Primary data, (2021)

F(1,91)=64.034, with a significance level of 0.000, according to the analysis of variance. The F test result provides a measure of the model's absolute fit to the results. The F findings were extremely

significant (P0.01), indicating that the model matched the data.

The results revealed that there is a straight line representing a linear relationship, showing that these two variables are related.

Table4. 19 Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.484	.310		4.781	.000
	Social category after WV VSLAs project	.715	.089	.643	8.002	.000

a. Dependent Variable: Social category before intervention of WV VSLAs project

Source: Primary data, (2021)

Since the coefficient of correlation just indicates that there is a relationship between the two variables, it is a fixed value of 0, which is the intercept or expected value of X if Y is 0, meanwhile, if the population in Gasaka Sector had the high rate of the poverty before intervention WV VSLAs project is 1.484.

Therefore, this gives the β_1 (dependent variable-poverty reduction process) coefficient, then, the value of Y will change according to 0.715. The statistical importance of the relationship between the independent and dependent variables was shown by

these results. It is implied that regression model and coefficient $\beta_0=1.484$, $p<0.01$. considering the level of significance, the people of the Gasaka sector faced by the poverty where they required the intervention of WV VSLAs project described by change of ubudehe categorization.

Thus, to change the social category (ubudehe categorization) due to the intervention of WV VSLAs project shown and justified the contribution of the world vision Rwanda on improving household livelihood of Gasaka Sector.

5. Conclusions

The financial services provided by World Vision Rwanda through VSLA project including improving people welfare, improved house for household, increased income and getting Affordable assets. The welfare improvement justified here including payment of school fees and material for children (39.8%), payment of medical insurance (44.1%), improved feeding at home strongly (57%), eliminating malnutrition diseases at home (49.5%), improved clothing (45.2%), enhance the capability to contribute to festivity/funerals for neighbour's (49.5%), improved agricultural and livestock harvest (50.5%) and increased savings (49.5%). The improved house for household indicated by building a new house (46.2%), repaired the old house (39.8%), cementing the house (47.3%), construction of modern toilet (35.5%), installation of electricity in their house using Mobisol company (51.6%) and installing the water at home (36.6%). The affordable assets through VSLAS project presented were: mattress (66.7%), radio (66.7%), TV (60.2%), Mobile phone (87.1%), land (79.6%) and forest (78.5%). There was also the increasing of income via intervention of World Vision through VSLAs project. The findings highlighted that respondents purchased the land (47.3%), farming of livestock (50.5%), modern house for habitation (60.2%), easy to pay school fees (47%), access to medical insurance (52.7%) and they were able to pay loan (53.8%).

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References

- [1] Adams A.M., A. S. Mohammed & S. B. Kwakye (2014). Village Savings and Loans Associations and livelihood of people in rural communities in the BOLE District of Ghana: A case of village savings and loans associations supported by Jaksally Youth Group
- [2] Asha, A. A. (2013). Non Governmental Organizations (NGOs) and household food security: experience from Southern Ethiopia.
- [3] Banks, N., &Hulme, D. (2012). The role of NGOs and civil society in development and poverty reduction
- [4] Barela, H. R., Jha, S. K., Rai, C. K., & Yadav, R. (2018). Assessment of Livelihood Security of Tribal Farmers: A Case Study from Tribal Area of Madhya Pradesh, India. 7(3), 1135-1141.
- [5] Bizimana, J. P., Kienberger, S., Hagenlocher, M., &Twarabamenye, E. (2016). Modelling homogeneous regions of social vulnerability to malaria in Rwanda. *Geospatial health*.
- [6] Brocklesby, M. A., & Fisher, E. (2003). Community development in sustainable livelihoods approaches—an introduction. *Community development journal*, 38(3), 185-198.
- [7] Buckingham, J., Wheldall, K., &Beaman-Wheldall, R. (2013). Why poor children are more likely to become poor readers: The school years. *Australian Journal of Education*, 57(3), 190-213.
- [8] De Wet, T., Patel, L., Korth, M., & Forrester, C. (2018). Johannesburg poverty and livelihoods study. 2008. Johannesburg: Centre for Social Development in Africa.
- [9] District, N. (2013). District Development Plan.Nyamagabe Development strategies, 2018.
- [10]Frewer, T. (2013). Doing NGO Work: the politics of being 'civil society'and promoting 'good governance'in Cambodia. *Australian Geographer*, 44(1), 97-114.
- [11]Habumuremyi P. D., V. Habamenshi&G.Mvunabo (2019). Village Savings and Loan Associations and Social Economic Development of Poor Households in Rwanda. A Case of Murundi Sector (2015- 2019) *
- [12]Hamed T. 2016. Validity and Reliability of the Research Instrument; How to Test the Validation of a Questionnaire/Survey in a Research
- [13]Hope Sr, K. R. (2013). The growth of urban communities in Kenya. *African identities*, 11(3), 274-289.
- [14]Horowitz &Jason (2017). [Ship Monitoring Rescues of Migrants Refuses to Be Rescued](#) . *The New York Times*. [ISSN 0362-4331](#). Retrieved 2019-11-2
- [15]Japheth A. &Yaya (2014).Choosing the right measurement instrument for your project ;tips to apply.
- [16]Karklins, L., & Mendoza, J. (2016). Literature Review Architects and Mental Health. A Report Prepared for the NSW Architects Registration Board. *Queensland: ConNetica.(June 2016)*.
- [17]Khathi, K. J. (2018). NGO accountability in Lesotho: a governance perspective of the societies (amendment) act 2001 (Doctoral dissertation).

- [18] Ksoll, C., Lilleør, H. B., Lønborg, J. H., & Rasmussen, O. D. (2016). Impact of Village Savings and Loan Associations: Evidence from a cluster randomized trial. *Journal of Development Economics*, 120, 70-85.
- [19] Lubbad, R., Løset, S., Hedman, U., Holub, C., & Matskevitch, D. (2016, October). Oden arctic Technology research cruise 2015. In *Arctic Technology Conference*. Offshore Technology Conference.
- [20] Mansuri, G., & Rao, V. (2004). Community-based and-driven development: A critical review. *The World Bank Research Observer*, 19(1), 1-39.
- [21] Mohanan, S. A. (2012). Cross-Cultural validation of the performance failure appraisal inventory-short form: a malaysian adaptation. *Malaysian Journal of Sport Science and Recreation*, 8, 51-62.
- [22] Mojumder, M. J. H., & Panday, P. K. (2019). Government and NGOs in South Asia: Local Collaboration in Bangladesh. Routledge.
- [23] Muhia, M. E. (2020). Influence of Socio-economic Factors on Sustainability of Women Empowerment Groups in Pastoralist Communities in Kenya: a Case of Tiaty Sub-county, Baringo County (Doctoral dissertation, University of Nairobi).
- [24] Mutsindashyaka, 2016). World Vision and Household Livelihood in Maraba Sector, Huye District (2012-2015).
- [25] Nakao, H., & Andrews, K. (2014). Ready to teach or ready to learn: A critique of the natural pedagogy theory. *Review of Philosophy and Psychology*, 5(4), 465-483.
- [26] Nikolaev, B., & Burns, A. (2014). Intergenerational mobility and subjective well-being—Evidence from the general social survey. *Journal of Behavioral and Experimental Economics*, 53, 82-96.
- [27] Njana, M. A., Kajembe, G. C., & Malimbwi, R. E. (2013). Are miombo woodlands vital to livelihoods of rural households? Evidence from Urumwa and surrounding communities, Tabora, Tanzania. *Forests, Trees and Livelihoods*, 22(2), 124-140.
- [28] Nyandekwe, M., Kakoma, J. B., & Nzayirambaho, M. (2018). The health-related Millennium Development Goals (MDGs) 2015: Rwanda performance and contributing factors. *The Pan African Medical Journal*, 31.
- [29] Ogbedebe, A. A. (2017). socio-economic and personality factors as predictors of functional reading skills among adolescents with mild-intellectual-disability in public special schools in southwestern, Nigeria (Doctoral dissertation).
- [30] Palgrave Macmillan. (2016). Rwanda. *The Statesman's Yearbook: The Politics, Cultures and Economies of the World 2017*, 1013-1017.
- [31] Patel, K., Guenther, D., Wiebe, K., & Seburn, R. A. (2014). Promoting food security and livelihoods for urban poor through the informal sector: a case study of street food vendors in Madurai, Tamil Nadu, India. *Food security*, 6(6), 861-878.
- [32] Paunovic, N. (2010). Behavioral-cognitive inhibition theory: Conceptualization of posttraumatic stress disorder and other psychopathology disorders. *Psychology*, 1(05), 349.
- [33] Rand D. Conger, Katherine J. Conger, and Monica J. Martin (2011). Socioeconomic Status, Family Processes, and Individual Development.
- [34] Rowley, J. (2014). Designing and using research questionnaires. *Management Research Review*.
- [35] Rukagana E. M. (2015). Role of voluntary savings and loans (vsl) in improving socio-economic conditions of pro-poor people in rural area Case study of CARE International in Busasamana Sector, Nyanza District: 2009-2013
- [36] Senadza, B. (2014). Income diversification strategies among rural households in developing countries. *African Journal of Economic and Management Studies*.
- [37] Shiner, R. L., & Caspi, A. (2012). Temperament and the development of personality traits, adaptations, and narratives.
- [38] Sibanda, P. (2016). *Impact of the free primary education policy on the education of learners with disabilities: A survey of inclusive and special schools in Lusaka district of Zambia* (Doctoral dissertation, University of Zambia).
- [39] Sisimwo, D. (2014). Strategies employed by police officers in curbing crime within urban areas: a survey of eldoret town (Doctoral dissertation, Kisii University).
- [40] Sodian, B., Licata, M., Kristen-Antonow, S., Paulus, M., Killen, M., & Woodward, A. (2016). Understanding of goals, beliefs, and desires predicts morally relevant theory of mind: A longitudinal investigation. *Child development*, 87(4), 1221-1232.
- [41] Steinert, J. I., Zenker, J., Filipiak, U., Movsisyan, A., Cluver, L. D., & Shenderovich, Y. (2017). Do saving promotion interventions help alleviate

- poverty in Sub-Saharan Africa? A systematic review and meta-analysis (No. 226). Discussion Papers.
- [42] UNDP (2014). Facts about Least Developed Countries (LDCs), UN office of the High Representative for the Least Developed Countries, Landlocked Developing Countries and Small Island Development States, New York: United Nations.
- [43] Uwase N. F., E.Ndabaga&J.Oduor.(2015): Effect of project model change on project performance in rwanda: a case of world vision's village savings loan associations project model in nyamata area development programme
- [44] Zikmund, W. G. (2012). Business Research Methods with Infotrac.