

**REPLICATION OF SUCCESS FOR
SUSTAINABLE RURAL LIVELIHOOD
DEVELOPMENT WITH INCLUSIVE
INNOVATION IN RWANDA**

**A CASE OF NEIGHBOURING
COMMUNITIES INNGERUKA SECTOR,
EASTERN PROVINCE**

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ABSTRACT

The current paper intended to examine the replication of success for sustainable rural livelihoods development with inclusive innovation in Rwanda. It was undertaken under four specific objectives which involved to determine the features of replication of success among neighboring communities, to examine the types of channels for replication of success, to assess the extent to which the replication of success sustains the neighboring communities' livelihoods and too determine the moderating effects of replication of success among neighboring communities in Ngeruka Sector.

The data underlying this study were collected within 10 months of fieldwork since November 2020 to August 2021 in 12 villages of Ngeruka sector in Bugesera District- Eastern Province. Among 800 most vulnerable people, the 300 were randomly selected among others to participate in the study. The qualitative and quantitative data were collected using 300 community member-based questionnaires, administered in the local language. The participants to whom the questionnaires were addressed corresponded to 293 while other 7 were interviewed.

The 12 Focus Group Discussions were also conducted to 24 groups included the 12 pre-assisted groups while other 12 referred to the recipients of successes. In the absence of an official census, a household register was compiled consisting of 3,170 community members (in neighboring communities). It was seen that, this approach helped to reduce and combat conflict among households as resulted from poor living conditions (33.6%) and reduced the culture of dependence on external or foreign donors or to remain a burden on the government with 61.7% of respondents affirmed. The study explained on how the

mutual support among the communities themselves was a good way to keep them from migrating to other parts of the country for searching for lives, rather enabled them maintaining their community (63.6%). In addition, infrastructures and other natural resources were sustainably managed; for example, the people were able to use their resources wisely and make them productive such as land (76.6%), water with 3.6%, livestock (67.3%) and money with 64.3%.

This approach identified itself as the only way to help communities cope with their problems and be able to find lasting solutions. Empowering communities as well as giving them opportunity to make decision have increased their motivation and reduce their resistance to community changes. The study encouraged public, private and non-governmental organizations to take advantages on the applicability of replication of success towards the community resilience and sustainable livelihoods development. All concerned organizations are recalled to help communities bearing the culture of ownership spirit as the real pathway for the replication of success to take place. The findings of this study are highly privileged to recommend the government of Rwanda to adopt the replication of success related policy among others.

Key words: Replication of success, reciprocity, social support, rural livelihood, community self-help, sustainable development, innovation

1. Background to the study

Establishing the concept of sustainable rural livelihoods, as derived from sustainable development, requires an understanding of the complex interaction between at least the sociopolitical, economic and ecological spheres, with humankind at the centre (MacDonald, 1994). Gause (2007) describes this interaction as the linkage of citizens to nature (ecological) and to one another (sociopolitical) to create healthier and vital neighborhoods (economic); it involves residents in community governance and environmental stewardship, creating sustainable communities. Sustainable rural livelihood development is situated within the broader category of sustainable development, a planning approach that has gained considerable traction since the 1970s. The best-known definition of sustainable development is “development that meets the needs of the present without compromising the ability of future generations to meet their own needs” (WCED, 1987). Initially, sustainable development focused on its environmental aspect, recognizing the necessity of meeting the complex needs of people, while maintaining the integrity of natural systems that support all life (Silberstein and Maser, 2000). Dasmann (1975) believed that sustainable development should be the rational use of the environment to provide the best possible sustainable quality of life for humanity. In other words, “using environmental resources to provide a sustainable living environment for as long as possible”, with the quantitative and qualitative needs of people determining the quality of life.

Speaking of the conservation of our environment, Rwanda is a small, landlocked country in central east Africa. It is one of the most densely populated countries in the world, with more than

400 inhabitants per square kilometer (Bertelsmann Stiftung, 2014). Considered to be among the smallest countries on the continent, Rwanda's total area is estimated to be KM^2 26,338. According to Rwanda's National Institute of Statistics (NISR, 2017), in 2015, the population density in Rwanda was estimated to be 445 people per KM^2 and the total population is approximately 11,809,295 according to 2017 NISR projection. According to official statistics, the poverty rate in Rwanda decreased from 58.9% of the population in 2000/2001 to 38.2% in 2016/2017 (using the national poverty line).

Nevertheless, over one third of people are still below the poverty line and 16% are classed as extreme poor. Poverty rates are higher in rural areas than in urban areas at the national poverty line. The 43.7% of people in rural areas are poor and 18.1% are extreme poor compared to a 15.8% poverty rate and 5.8% extreme poverty rate in urban areas (NISR, 2017). This study recalled the purpose of the community self-help initiatives through the replication of successes, which is community sustainable livelihoods development by accelerating the pace of developing such that the people themselves assert their economic, social, and cultural conditions maintaining the balance in concerned community ecosystem matching with SDG-1 (no poverty), SDG-2 (zero hunger), and SDG-3 (good health and well-being) (Rondinelli and Mandel, 1981).

Whereas community self-help initiatives through success replication scheme for the development purpose are defined and conceptualized variously, and its modes of operation are made up of three essential elements: (i) the participation by the people, (ii) initiative self-help by the people, and (iii) strengthening the community as an entity (Adedayo *et al.* 1991). Community Self-

help is an attempt to reduce poverty and satisfying basic needs by involving locals through replication of successes. In order to make this study more comprehensive, the researcher employed three connotations such as community initiatives, sharing of achievements and replication of success.

2. Problem statement

Rural areas differ markedly in their development experience, economic structure, natural and human endowments, geographical location, demographic and social conditions. Therefore, they are affected in different ways, and to differing extents, by socio-economic and policy changes shaping the national and economic environment” (OECD, 1998: 15). Extreme poverty is mainly a rural phenomenon. Four of every five people below the \$1.90-a-day international income poverty line lived in rural areas (Castañeda, 2018). Agenda 2030 relies on 17 sustainable development goals and 169 targets supported by the United Nations as a global effort to manage current challenges related to poverty, climate, environmental pollution, geographical inequalities, prosperity, peace, and justice. Rural changes of the economic sources of livelihoods may accompany innovational changes or changes in habitats, family systems or relationships between humans and nature (Rauch, Beck-mann, Neubert, Rettberg, 2016).

There has recently been increasing interest in the Socio-economic relationship between rural households and environmental resources (Cavendish 2000; Fisher 2004; Vedeldet *al.* 2004). It has been shown that rural households depend quite heavily on freely-provided environmental goods and services to sustain their welfare, through the provision of both productive inputs and consumption goods. Poverty in rural communities of Rwanda will

not decline without growth in rural incomes, and rural incomes will not grow without reducing inequalities among communities, and this will not be achieved unless there is a fair share of outcomes just for an effective less dependency on external aids. Most external help actually overrides or undercuts the budding capacity for self-help and thus ends up being unhelpful (Gronemeyer, 1992).

Perhaps the best even the only effective slogan for aid is find out what the people are trying to do and help them to do it better (Schumacher, 1964). The big concern is that, all aids are based on the simple working assumption that the condition of needing aid was externally imposed and the aid recipients share no responsibilities. However, over the course of time, such aid tends to undermine this assumption, as the aid in effect becomes a reward for staying in the state of needing aid (Murray, 1984). All this creates dependency and learned helplessness. With this, the concept of Community Self-Help, replication of successes and sharing of achievements gained prominence in various parts of the world (Ellwood, 1988). According to the United Nations, the ambitions of the global Sustainable Development Goals (SDGs) are to put people “at the centre of sustainable development and strive for a world that is just, equitable and inclusive” (UN 2015). It connotes that the people themselves assert their economic, social, and cultural conditions. It involves all the members of the community and requires their fullest participation in first making and then implementing decision for their well-being and development. The 2 main questions were identified as triggers to conduct this study “how can Rwanda be able to end such extreme poverty alongside with the achievement of sustainable development? And how rural communities ‘livelihoods are in relationship with environment? Alongside with these questions,

the researcher attempted to examine how the replication of success can sustain rural livelihoods development with inclusive innovation in Rwanda.

3. Objective of the study

In this study, two objectives were targeted namely general and specific objectives

3.1 General Objective

The general objective of this study was to examine the replication of success for sustainable rural livelihoods development with inclusive innovation in Rwanda.

3.2 Specific objectives

- i. To determine the features of replication of success among neighboring communities in Ngeruka Sector
- ii. To examine the types of channels for replication of success among neighboring communities in Ngeruka Sector
- iii. To assess the extent to which the replication of success sustains the neighboring communities' livelihoods in Ngeruka Sector
- iv. To determine the moderating effects of replication of success among neighboring communities in Ngeruka Sector

4. Literature review

In this section, the researcher intended to discuss the 6 types of theories associated with the study. Those included the Human Capital Theory, Social Capital Theory, Physical and financial capital Theory, Reciprocity theory, Theory of the gift (Gift relationship Theory) and Social Support Theory.

4.1 Human Capital Theory

Human capital theory in this study referred to the transmission of knowledge, education, and work competence among communities; however, thus community facilitators were considered as productive assets not costly assets (Hendricks, 2002).

4.2 Social Capital Theory

Bourdieu (1986) defines social capital as ‘social connections, mutual acquaintance and social recognition’. Coleman (1988) indicates all those features of the social structure that might facilitate actions of individuals within the social structure itself. Social capital is about the value of social networks, bonding with similar people and bridging between diverse people, with norms of reciprocity (Dekker and Uslaner 2001). Thus, social capital can be considered as the stock of active connections among individuals: the trust, mutual understanding, and shared values and behaviors that bind the members of human networks and make possible cooperative action (Cohen and Prusak 2001).

4.3 Physical and Financial Capital Theory

This theory suggests that people with enough Physical and Financial capacity have added value in acquiring resources to

efficiently exploit the entrepreneurial opportunities (Clausen, 2006). Physical and Financial capital are the apparatus used to produce a good and service. Physical and Financial capital represent the tangible man made goods that help and support the production.

4.4 Reciprocity theory

The study was developed under three degrees of reciprocity: generalized, balanced and negative (Sahlins 1968, Service 1966). With generalized reciprocity, someone gives to another person and expects nothings concrete or immediate in return (Harris, 1974). People routinely share with other band members (David, 1992 and Kent, 1992). Generalized reciprocity through Rwandan proverbs can be as: *Uzangayireguhera, ntuzangayiregutinda*. Agafunikabagaraubucutin'akarenge... Here, the delay to return the gift is not determined. Balanced reciprocity applies to exchanges whereby the giver expects something in return (Sahlins, 1972).

This may not come immediately, but the social relationship will be strained if there is no reciprocation. Balanced reciprocity through Rwandan proverbs as: *Akebo kajya iwamugarura, Agasozi kazamutse inka kamanuka umugeni or kamanuka iyindi, Ha uguha* (Inumay'i Burundi ibwira iy'i Rwanda). Negative reciprocity occurs when an action that has a negative effect on someone is returned with an action that has an approximately equal negative effect (*Caliendo, et al., 2012*).

4.5 Agonistic Exchange Theory: Gift relationship

Marcel MAUSS (1923) analyzed the agonistic as exchange in which ceremonial values transcend economic values in order to gain social status and prestige. According to him, a gift in nonindustrial traditional societies supposes 3 obligations: to give, to receive, and to return what one has received. Marshall Sahlins (1972) argues that competition between partners fight against each other, not by using weapons, but items (goods and services), in order to acquire honor, social consideration, social prestige, and thus to increase or improve one's social status and that of his group.

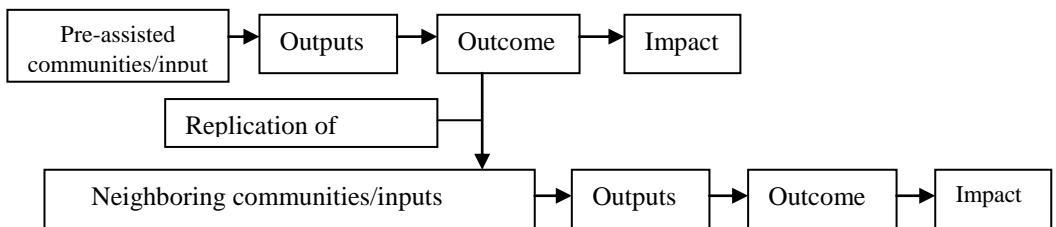
4.6 Social Support Theory

Social support is commonly conceptualized as the social resources on which an individual can rely when dealing with life problems and stressors (Thoits, 1995). Elaborating on this idea, Cullen, Wright, and Chamlin (1999) described social support as a process of transmitting human, cultural, material, and social capital, whether between individuals or between larger social units (communities, states) and their members. Support is often provided informally, through social relationships, but support can also be provided formally by an entity with an official status, such as government assistance programs or the justice system. Social support has direct and indirect effects on delinquency and other indicators of well-being. As a direct effect, people who experience social support may engage in less delinquency. As an indirect effect, social support may act as a buffer between risk factors for delinquency and participation in delinquent behavior. Social support has several dimensions (Thoits, 2011).

First, support can be conceptualized as perceived, feeling supported or feeling that support is available, versus received, reporting that assistance was provided. Second, support can be instrumental, informational, or emotional in nature. Instrumental support refers to the provision of materials or assistance with practical tasks or problems, such as lending money or borrowing a car. Informational support refers to advice giving, guidance, or providing information that may help a person solve a problem. Emotional support involves the expression of sympathy, caring, esteem, value, or encouragement. Third, social support can be distinguished by its source. Members of an individual’s primary group, significant others such as family members and friends are frequently considered sources of support. Individuals may also draw support from their secondary groups, in which relationships are more regulated or hierarchical and less personal, such as schools and religious organizations.

The most important sources of support, the level of support in a relationship, and the impact of support on behaviors vary over the life course (Umberson, Crosnoe, and Reczek, 2010).

5. Conceptual framework



**Figure 1: Conceptual framework,
Source: Own construction**

6. Empirical studies

Different types of capitals have been considered as inputs, which enter the process of replicating goods and services among neighboring communities (Menzie, 2003). Human capital plays an important role in people's development, improving the life and income, increasing knowledge, skill, and product capacities, economic growth and reducing poverty. It has been asserted by Hawkes and Ugur (2012) that investing in education and skills has long been considered a key driver of economic development of communities. For example, Zhao (2008) considers investment into human capital through education and training as key to national socio-economic development. Considering social capital as a productive factor, Heller (1996), Ostrom (2000) and Rose (2000) point out that social capital contributes to economic growth by facilitating collaboration between individual interests towards the achievement of increased output. The social capital promotes the community's welfare and directly affects the efficiency of goods and services. For example, the high level of trusteeship in the society increases the costs of network transactions (Rastogi, 2002). The survival of communities depends on their power of rebuilding

7. Data collection

The data underlying this study were collected within 10 months of fieldwork (*November 2020 - August 2021*) in 12 villages of Ngeruka sector in Bugesera District- Eastern Province. The qualitative and quantitative data were collected using 300 community member-based questionnaires, administered in the local language by a team of 12 local enumerators. The questionnaire used contained questions related to human, physical

and social capitals, sustainable rural livelihoods development as well moderating effects.

Due to the nature of the study, it required for data to be collected after each term. Apart from questionnaires, the 12 Focus Group Discussions were also conducted to 24 groups included the 12 pre-assisted groups while other 12 referred to the recipients of successes. In the absence of an official census, a household register was compiled consisting of 3,170 community members (in neighboring communities).

According to the nature and aim of the study, the selection was based on the level of people's vulnerability and the 800 most vulnerable people were identified in the neighboring communities. The selection criteria consisted of widows, widower, single mothers, women headed households, people living with disabilities, child headed households, people with chronic disease, people experienced sexual gender based violence and those ranked the first category of poor living conditions (1st category of Ubudehe). Among such 800 most vulnerable people, the 300 were randomly selected among others to participate in the study. The participants to whom the questionnaires were addressed corresponded to 293 while other 7 were interviewed. To collect field data, the participatory technique was also used. Participatory research aimed to work closely with targeted community members. There was often an assumption that local communities existed as distinct entities: small, well-bounded, and homogeneous and integrated (Schwartz, 1981).

The four modes of participation were taken into account including contractual technique whereby people were contracted into the project to take part in their enquiries or experiments. The 2nd mode was a consultative technique by which people were asked

for their opinions and consulted by researchers before interventions were made while in the collaborative technique, the researcher and local people worked together on project, initiated and managed by the researcher and lastly, the collegiate technique, the researcher and local people worked together as colleagues with different skills to offer, in a process of mutual learning where local people had control over the process (Biggs, 1989). Within these needs, values, sentiments and ideologies were shared. For the researcher to work together with community members as participants in research enabled to enhance the effectiveness of the study and to save time and money (Chambers, 1992).

8. Presentation of data and discussions

With this section, the researcher intended to discuss the four specific objectives of the study as related to discovering the features of replication of success, examining the types of channels for replication of success, assessing the extent to which the replication of success sustained the neighboring communities and determining the moderating effects of replication of successes.

8.1 Distribution of respondents with their respective communities

The following tables indicated the number of participants to which the study was conducted respectively with their villages of resident and names groups to which they belonged.

Table 1: First round distribution of respondents for Focus Group Discussions

S/N	Pre-assisted communities	Groups	Number of members
1	NYAKAYENZI	TUBUMWE	25
		TERIMBERE MUGORE	25
2	KARAMA	URUHARE MW'ITERAMBERE	25
		TERIMBERE MUBYEYI	25
3	TWIMPARA	DUHARANIRE KWITEZIMBERE	25
		TWISUNGANE	25
4	KAMUGERA	NEZERWA IWACU	25
		EJO HEZA	25
5	KABUMBWE	ABITEZIMBERE	25
		ABISHYZEHAMWE	25
6	RUBIRIZI	ABADAHWEMA	25
		ABADAHEMUKA	25
	TOTAL		300

Source: Field data, November 2020 - August 2021

The first 6 communities composed of 300 people (Table 1; 193 females and 107 males) consisted of the pre-assisted communities while the 2nd (Table 2) made up of 208 females and 92 males were the recipients of successes. The first communities were named pre-assisted to mean they were supported by a certain Local Non-Governmental Organization via a livelihood project aimed at improving their well-being through the increase of food and income security, gender equality and resilience to climate change. During the project implementation, the beneficiaries were assisted and trained how they would share their achievements to other needy neighboring communities. To do this, after 3 years of the project implementation, other 6 neighboring communities were

identified among others and the replication of success was applied to them thanks to the first communities' successes.

8.2 Features of replication of success among neighboring communities

This section intended to target the 1st specific objective of the study in which the features of replication of success were discussed. Such features consisted of human, physical and social capitals and how they were replicated from the successful assisted communities to the neighboring vulnerable communities. The section explicated also about the period of time the replication of success might last.

Table3: Distribution of respondents about features of replication of success among neighboring communities

Pass-on of human capital /Soft and practical skills	Number of Community Trainers (n=300)	Percent	Neighboring Trainees (Frequency)	Percent
Livestock management and Treatment	12	4.0	300	100.0
Modern agricultural techniques	12	4.0	285	95.0
Micro-credit and micro-business	12	4.0	300	100.0
Cooperative management	6	2.0	85	28.3
Sexual Gender Based Violence	6	2.0	140	46.6
Disaster management	6	2.0	300	100.0
Conflicts management	6	2.0	91	30.3
Total	60	20%		
Pass-on of Physical capital	Givers (Frequency)	Percent	Receivers (Frequency)	Percent
Livestock (female goats)	236	78.7	236	78.7

Seeds (maize, g-nuts, beans, sorghum)	281	93.7	281	93.7
Income (Village Saving & Loan Associations)	248	82.6	300	100.0

Source: Field data, November2020 - August 2021

In order to gather information, the reference was made to 300 beneficiaries of a certain project from 6 communities (villages) and other 300 neighboring community members from other 6 villages.

The table above describes how the local communities provided assistance to other neighboring poor communities. Their supports were based on their achievements over the four years (2016-2019) they have received from the external aids or project. Out of 300 targeted community members, the 20% of them were selected among others and received trainings in various domains including livestock management and treatment, modern methods of farming, micro-credit and micro-business, cooperative management, Sexual gender-based violence, disaster and conflict management. After being trained on the above mentioned subjects, the trainees were identified as community facilitators respectively entitled as paravets, lead farmers, VSLAs leaders, Cooperative leaders, gender champions, Disaster Risk management Committee, local community mediators or conflict resolution facilitator. These were supposed to transmit soft and practical skills to other 300 neighboring community members. After four years, these 300new trainees will also select among themselves other members who will be specially trained and thus impart knowledge to other people in the same way. Davenport and Prusac (1998) define knowledge sharing as “people who

apply societal knowledge by utilizing knowledge already present in the community.”

In accordance with Cummings (2004), Pulakos, Dorsey and Borman (2003) knowledge sharing refers to the provision of task information to support collaboration with the purpose of solving issues, expand new concepts, or implementing practices and procedures. Numerous societal assets can be acquired by knowledge sharing, such as a community’s accomplishments and innovation (Collins and Smith, 2006), competitiveness (Argote and Ingram, 2000), faster product development and lower production costs (Lin, 2007; Hansen, 2002). Other advantages include knowledge appliance and competitive advantages for the community (Berman, Down and Hill, 2002; Jackson, Chuang, Harden and Jiang, 2006). In a professional context, sharing knowledge highly relied on shaped understandings of individuals on knowledge sharing as well as the depth and width of their network (Cabrera & Cabrera, 2005). This was also linked to innovation, which, according to Kreiner and Schultz (1993) emerged from communities' relationships with and membership in internal and external communities, where they acquired and absorbed new knowledge and deepen existing knowledge.

In addition to the knowledge provided by community facilitators, the beneficiaries were also involved in supporting other poor neighbors with some of their achievements whereby the study mentioned the 78% people who passed-on female goats, 93.7% who donated maize, ground-nuts and beans while 82.6% grouped into savings and loan groups passed on the same amount of given funds to other new neighboring groups. The beneficiaries were

given 2 female goats by the project and were requested to donate 2 new born female goats to other needy neighbors and this was also practiced to seeds by which they were asked to provide to others the same quantity of seeds they were supported with.

8.3 The channels for replication of success

The study examined the types of channels that enabled to replicate successes among the targeted communities. This was the 2nd specific objective of the study. By referring to table 3, the researcher was impressed to understand how human, physical and social capitals linked to one another and how they were collaborative to ensure the replication of success and this was identified as the “reciprocity”. During the analysis, the three types of reciprocities were discussed namely generalized, balanced and negative reciprocity.

Table4: Demonstration about channels for replication of success

Pass-on of human capital / Soft and practical skills	Reciprocity
Livestock management and Treatment	Generalised
Modern agricultural techniques	Generalised
Micro-credit and micro-business	Generalised
Cooperative management	Generalised
Sexual Gender Based Violence	Generalised
Disaster management	Generalised
Conflicts management	Generalised
Pass-on of Physical capital	Reciprocity
Livestock (female goats)	Balanced and generalised
Seeds (maize, g-nuts, beans, sorghum)	Balanced and generalised
Income (Village Saving & Loan Associations)	Balanced and generalised
Social capital	Reciprocity
Values	Balanced
networks	Balanced
Respect and trust	Balanced
Recognition and identity	Balanced
Services	Reciprocity
Treatment of livestock by paravets	Negative
Joining existing cooperative	Negative

Source: Field data, November2020 - August 2021

The study identified three channels through which the replication of success was applied. The models as shown in the table were used in a complementary or independently way. The first method was to select the achievements that were supposed to be given to the vulnerable communities but the donors did not intend that the

donations will be returned to them (generalised reciprocity). For instance, the dissemination of skills or other mobilization campaigns provided by the community trainers; the trainees were never requested to pay for any compensation in order to attend the training sessions; this approach worked independently (Harris, 1974).

Secondly, the transfer of results from some communities to others was done and after a certain period of time the recipients passed-on a part of their successes to other people in needy and so forth. These people who were provided with achievements by others were also sensitized and encouraged to donate part of materials towards their neighbors after inquiring that there were significant achievements to them. Here, the study indicated how the pre-assisted communities who were given female goats, seeds (beans, g-nuts and maize) and funds through Village Saving and Loan Associations to run small businesses have also passed-on the same quantity of given supports to other people in needy. The study explicated that even though the giver received nothing from the recipient but the later was supposed to pass-on a part of success to other vulnerable neighbors and the approach was called “balance and generalized reciprocity” (Harris, 1974, Fleisher 2000). The combination of two channels (balanced + generalised) resulted from the fact that, the giver expected nothing from the recipient however the later must have passed-on success to other vulnerable ones. The last method used to replicate success among neighboring communities was based on the fact that people who were offered with services had something to give immediately to the donor. A typical example was identified to the community

members who were previously trained on livestock treatment; these were identified in the community as “paravets”. They provided livestock treatment services and a certain small amount of money was charged.

Unless there was an agreement between the service provider and the beneficiary, but this method provided that the service must be paid immediately however the cost of the service was somehow lower because the approach considered this as a mutual support between the members of the community otherwise the approach was named “negative reciprocity” (*Caliendo, et al., 2012*). Another fact was seen to the people who joined cooperatives as new members but they required paying a share and it was the same as seed storing; when they stored seeds in the seed banks they were supposed to pay the security fees the security fees to the cooperative.

8.4 Extent of replication of success for Sustainable community’s livelihoods

The 3rd Specific objective was discussed in this sub-section. The aim of this part was to reveal how the replication of success sustained the neighboring communities of Ngeruka sector who were just as recipients of successes generated by the pre-assisted communities. All targeted community members (300) including 219 females and 81 males were taken into consideration in providing data. Here, the major indicators were discussed in the table below:

Table5: Distribution of respondents about the extent of replication of success

S/N	Indicators	Frequency n=300	Percent
1	Accessed to basic needs		
	At least 2 meals a day	292	97.3
	Paid school fees for children	218	72.6
	Paid medical insurance	284	94.6
	Rebuilt or built a new house	32	10.6
	Built rain water tank	11	3.6
	Electrified a house	13	4.3
2	Household conflict reduced	101	33.6
3	Willingness to stay in the community increased	191	63.6
4	At least 1/2 of own land is used	230	76.6
5	Sources of income diversified	193	64.3
6	Dependency rate reduced	185	61.6
7	Purchased more land	22	7.3
8	Able to take decisions at the community level	56	18.6
9	Livestock production increased	203	67.3
10	Agricultural production increased	241	80.3
11	Accessed to micro-financial institutions	37	12.3

Source: Field data, November2020 - August 2021

The study demonstrated how the economy and achievements were better shared among the communities towards inequality reduction purpose; that sharing community achievements made it

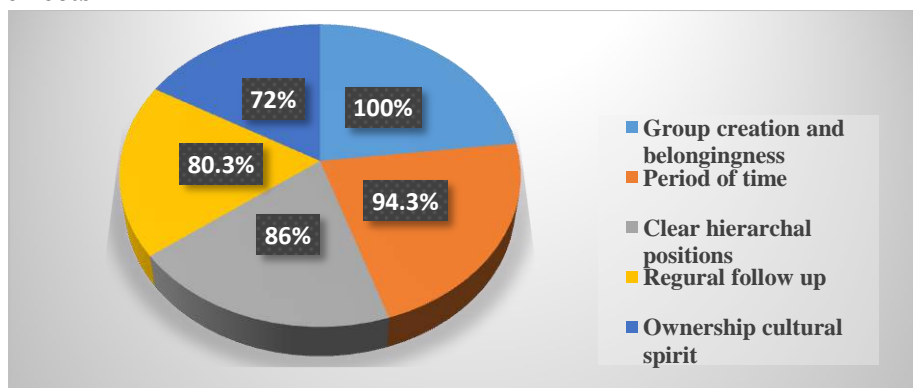
possible for a large number of people to have access to basic household needs such as getting meals more often, being able to afford medical care and paying for children's education as approved respectively by 97.3, 72.6 and 94.6 %.

It was seen that, this approach helped to reduce and combat conflict among households as resulted from poor living conditions (33.6%) and reduced the culture of dependence on external or foreign donors or to remain a burden on the government with 61.7% of respondents affirmed. Not only that, but this study has also shown that, the real development is the one in which communities can express their full potential where they can find the most basic solutions to the problems they face and communities themselves have achieved many that they could not achieve if they continued to lay hands on the government or on foreign aid. The study explained on how the mutual support among the communities themselves was a good way to keep them from migrating to other parts of the country for searching for lives, rather enabled them maintaining their community (63.6%).In addition, infrastructures and other natural resources were sustainably managed; for example, the people were able to use their resources wisely and make them productive such as land (76.6%), water with 3.6%, livestock (67.3%) and money with 64.3%.

8.5 Moderating effects of success replication among neighboring communities in Ngeruka sector

The section comes to reveal the relationship between replication of success and its impact. This is shown by testing the moderating effects via a number of measurements as shown below:

Figure: 1 Distribution of respondents on the moderating effects



Source: Field data, November2020 - August 2021

The study identified a number of moderating effects that motivated the replication of success amongst the neighboring communities in Ngeruka sector and those included the community structure which consist of breaking down beneficiaries into small groups to easy the communication and all beneficiaries belong to such groups. This enables also to conduct the regular follow-up as confirmed by 80.3 % of respondents. The replication of success requires enough time for the concerned people to prepare themselves as confirmed by 94.3 percent of beneficiaries. It concerned the forth specific objective of the study. It argued that by implementing a less centralized community structure, replication of success was simplified (Kim and Lee, 2006). It was

important for communities, to create opportunities for communication across groups via clear positions and hierarchy (86%) (Yang and Chen, 2007). The study detected two key elements that supported the replication of success or sharing of achievements: a structure encouraging the flow of communication between groups or units and establishment of leading committees at a level that made it not too difficult to share and practicing a realistic approach that was comprehensible (Hashimet *al.*, 2016). In case a social collaboration platform was unsupervised, the replication of success could not be guaranteed. The study depicted that; sources needed to be reliable to be used by the communities (Vargoet *al.*, 2003).

It was argued, that monitoring and evaluation of the approach enriched the quality and raised expectations. The study has shown that, in order for communities to work together and develop in a sustainable way, there was appropriate and sufficient period of time for pre-assisted communities to make sure they were truly evolving. Simply put, it was easy to measure the time limit for replication of success from best community towards the needy ones, because it depended on the size of their achievements and what they were able to achieve by referring to the baseline. The study argued that although the early communities provided assistance to other poor communities after four years, it did not mean that the 4-year period was a norm or principle, but that it could go down or up depending on the extent of monitoring or follow up to the concerned communities. Well-monitored communities started replicating successes in a real planned time or little bit before.

A typical example of this study was that the pre-assisted communities began to help other vulnerable communities at the

same time as planned; and these second-round communities have also begun to show their willingness to help other poor communities as they have begun to show good achievements. For example, the first saving and loan groups have begun to support other groups after only one year of assistance. The support provided by such groups consisted of the funds known as start-up capital for income generating activities. This approach of sharing achievements among communities has no end; it is said to be unlimited when employed properly with an effective follow-up.

9. *Conclusion and recommendations*

The study has shown the worth of replication of outcomes among communities. This approach has helped the communities to help themselves and reduce reliance on external funding or to remain a burden on the government. People working together as communities through the replication of success can act both locally and globally (Westoby and Dowling, 2013). The process covered the sustainable rural livelihoods development and social change need, to insure the balance of activities and resources. It demanded to enable spaces for collective action to emerge and helping community-based initiatives to connect to one another directly (Howard and Wheeler 2015). Human, physical and social capitals were identified as both inputs and outputs to be replicated. The channels through which replication of success was done were generalized, balanced and negative reciprocity and worked either independently or collectively according to the type of material to be replicated. Communities to which replication of successes was applied were able to meet the basic needs and became champions to the conservation of the environment under the efficient use of resources both natural and artificial.

This approach identified itself as the only way to help communities cope with their problems and be able to find lasting solutions. Empowering communities as well as giving them opportunity to make decision have increased their motivation and reduce their resistance to community changes (Thomas *et al.*, 1996). The study encouraged public, private and non-governmental organizations to take advantages on the applicability of replication of success towards the community resilience and sustainable livelihoods development. All concerned organizations are recalled to help communities bearing the culture of ownership spirit as the real pathway for the replication of success to take place. The findings of this study are highly privileged to recommend the government of Rwanda to adopt the replication of success related policy among others.

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