









2012). This is mainly because, access to basic, adequate facilities is viewed as strongly related to the wellbeing of general population in any country. Infrastructure development is also the key aspect that is used to measure leader's performance in a country (Oyedele, 2012). Therefore, discussions on the concept and definitions of infrastructure development have to consider the viewpoints of researchers from different backgrounds. Such consideration is vital to facilitate understanding of the concept of infrastructure development.

An observation study conducted by Taylor, Kahawita, Cairncross & Hensick, (2015) revealed that the provision of basic amenities such as clean water supply is essential as it will determine the communities' health level. The consumption of untreated water can cause users to be infected with cholera which is an infectious disease that is brought by a bacterium called *Vibrio cholerae*. This is supported by studies done by Lantagne & Lasen (2012); Patrick, Berendes, Murphy, Bertrand, Husain, & Handzel. (2013); Etienne, Tappero, Marston, Frieden Kenyon & Andros (2013) who also found that water that are untreated, unfiltered and not chlorinated, can cause users to be infected with diseases than are brought by water such as cholera and usually the infected are from the rural areas with the absence of basic amenities and treated clean water resources.

Apart from this, electricity supply is also vital in ensuring the quality of life among rural communities. This is in line with previous studies done in this area, for example a study by Bose, Uddin & Mondal (2013), who examined the impact of the development of electric facilities for rural communities in Bangladesh. They found that the villages that are selected to be supplied with electricity demonstrated positive results in the aspects of production, profit margin, development and business modernization, women empowerment, quality of life and human capital development. On the other hand, Waeli & Mahdi (2017) felt that the use of alternative power resources that is environmental friendly such as solar power is a good and effective way to help the rural communities in Malaysia to have access to the electricity supplies in substitute with the use of electric generators that are costly and could cause air pollution. The use of environmental-friendly solar power is more beneficial as the resource is renewable.

Through his report in the Global Energy Network Institute 2014, Fong (2014) explained that most of the rural communities that do not have access to electricity supplies are among those in the developing countries. The rural communities with no access to electricity supplies is seen as having a low quality of life compared to their counterparts in the urban areas because electricity supply is a necessity for everyday life. Fong also stated that there are several negative implications caused by the absence of electricity supplies in rural areas such as the inability to store materials in the cold storage especially food and medicines, low exposure of lightings which can impact the education sector and economic productivity, the hindering of modernization process and the limitation of communication network and its effects during emergencies.

A number of Rwandan researchers have conducted researches on infrastructures and community development. Recently, Bangamwabo (2022), after conducting an exploratory research on Government Revenues and Infrastructure Development in Kicukiro District, he discovered that this district, which is located in the City of Kigali, made considerable effort to improve infrastructures that satisfy citizens' needs. The majority of improved infrastructures were roads, bridges, schools, and health facilities. Although Government revenues alone are not sufficient to finance budgeted infrastructures, Kicukiro district rarely delays completing started infrastructure due to lack of finance.

### **Theoretical Framework**

The positive relationship between infrastructure and community development is well-known. The concept of human development was based on growth of income alone, and to incorporate both human capabilities and empowerment, which relied much more on social development. Nevertheless, it is obvious that infrastructure contributes directly to conditions of life not only by increasing labour productivity, but also through the provision of a range of facilities that are either necessary or desirable for human existence. The crucial role played by infrastructure development in creating better conditions of life has been more highlighted. Infrastructure is important in terms of providing access to basic health services and thereby improving conditions of health and life. Of course, the effects of such investments need to be assessed in terms of how the additional infrastructure changes the lives of people in any given area, and what changes would make it more effective and useful in terms of employment and opportunities created by such infrastructure.

Leipzig (2003) found that quantity and quality of infrastructure-particularly of water and sanitation-have a strong positive impact on income equality, as well as on economic growth. A further study showed that enhanced access to roads and sanitation has been an important determinant in reducing disparities between the poorer and the richer regions of Argentina and Brazil. Studies of rural roads have shown that they raise the productivity and value of land for poor farmers. Rural roads have been found to have a substantial positive impact on overall poverty reduction. One study found that rural roads were the form of public expenditure that reduced poverty most effectively in India.

Other researchers argue that infrastructure development requires investment if such development is to take place in any country. Alleman, Hunt, Michaels, Muellers, Rappoport & Taylor (1994) and Ghafoor (2000), for instance, view infrastructural investment as an investment that can contribute the increase of economic growth. Infrastructure development is none other than a mechanism that increases the living quality of a society.

In terms of economy, infrastructure development can impact the employment rate, productivity, and income as well as give an added value. Infrastructure development can also boost political integration and reduce societal geographical gaps. The concept of infrastructure development also refers to the provision of fundamental infrastructure facilities such as the construction of roads and highways, availability of transportation, bridges, and ports and telecommunication systems (Cronin, McGovern, Miller & Parker, 1995; Madden & Savage, 1998). The basic physical development mentioned is considered important as it serves as an indicator to the progress and developmental process of a particular country. Lack of basic facilities shows that the country or region can be categorized as underdeveloped and is left behind by progress and modernization.

According to Jahan & McCleery (2005), infrastructure contributes significantly towards increasing income. This finding was across the four country studies which are Bangladesh, Thailand, Senegal, and Zambia. Also mortality rates are reduced with the expansion of infrastructure services in health and water areas. Infrastructure initiatives that improve a community's access to a primary health care center, with its medical equipment, skilled nurses, and health personnel, who work actively to promote healthy practices and impart health education to community residents, can contribute to reducing mortality rates, particularly, child and maternal mortality rates. Infrastructure has a positive impact on education: The country studies have argued that infrastructure contributed to educational attainment through various transmission mechanisms. First, better roads led to lower transportation cost and better security: as a result, school attendance improved and dropout rates fell, particularly, second, improved energy facilities, by providing electricity in households and bringing televisions and computers to households, helped students to improve their skills. Finally, there are a series of indirect impacts-enhanced income from other infrastructural development, better awareness of parents.

Shariff Abd Kadir (2013) who examined the impact of land transport infrastructure development on Malaysia's economy growth found that the investments in the land transport infrastructure give a significant impact on the country's long term economic growth. The study also emphasized the importance of the development in infrastructure in thriving several important sectors in the country such as manufacturing, service, international trade, production and agriculture sectors. This shows that the development of basic infrastructures like road infrastructure is essential in order to increase the rural communities' life well-being through the provision on amenities for the community use (Simkova, 2008; Zivelova & Jensky, 2008; Hlavsa, 2010; Rozema & Martens, 2010; Mascarenhas. Coelho, Subtil & Ramos, 2010 & Yilmaz, Dasedemir, Admis & Lise, 2010). The impact of the infrastructure development is also related to the quality of social services especially in the aspect of education, health and the quality of life of rural communities in general. This is in line with the study carried out in Nigeria by Calderon (2009) and Egbetokun (2009) who found that the basic infrastructure is an integral part of the rural development strategies because the infrastructure development is integrated with all other aspects, including agriculture, education, health, nutrition, electricity and clean water, which subsequently be developed as well. The development of the basic infrastructure in the rural areas is seen as a holistic approach where it could be the solution for the problems of inequality and social justice for rural areas in general.

### **Conceptual framework**

In this section, there is a conceptual framework.

### Independent variables

### Dependent variable

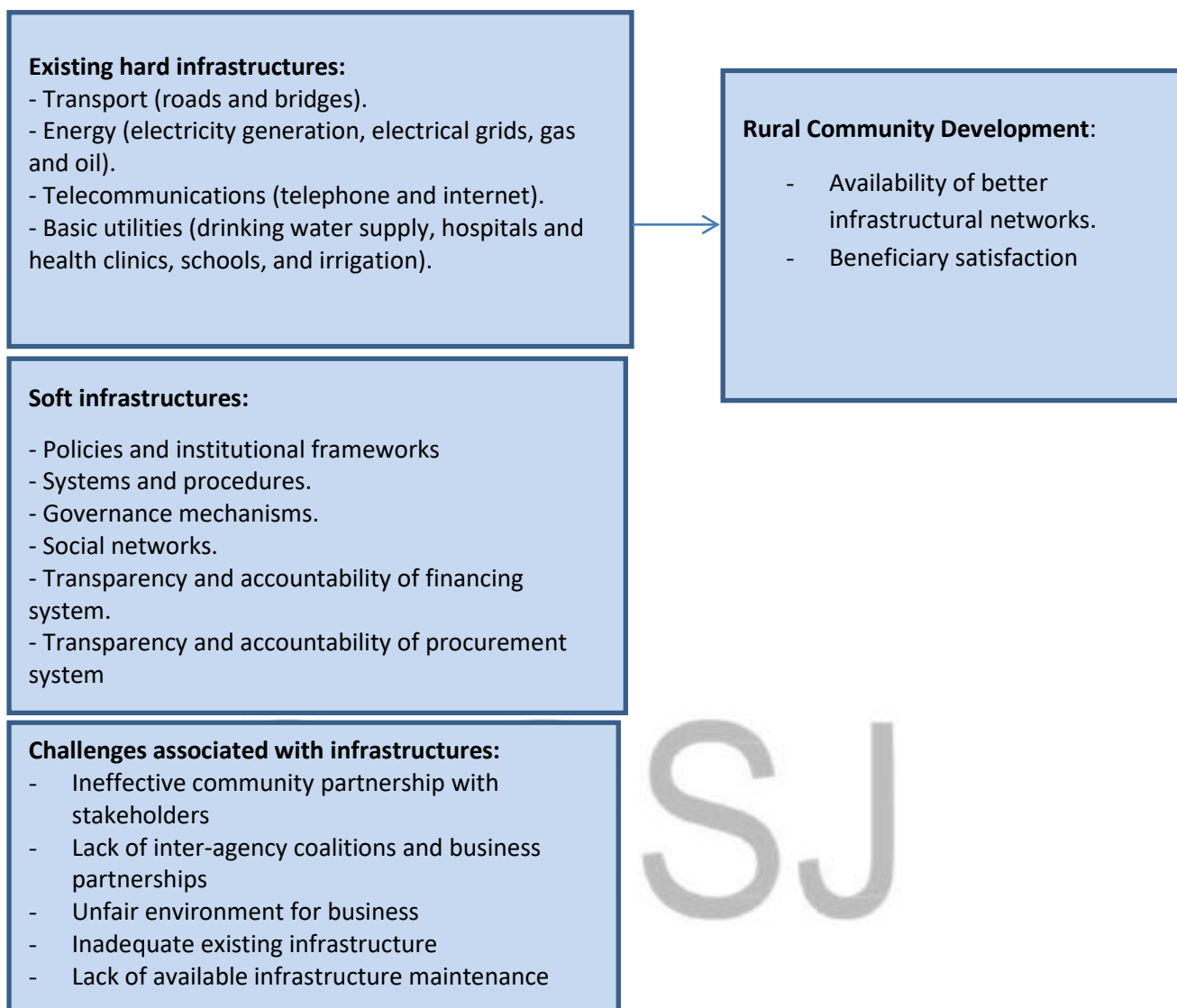


Figure 2.1 Conceptual framework

**Source:** Researcher, 2022.

In the figure 1, it is suggested that infrastructural facilities availability will lead or influence rural community development. In other words, basing on the conceptual framework, there is evidence that when rural communities access infrastructure development (availability of water, access to electricity and good roads network) may influence and lead to the positive change/ development, and well-being of the population will be improved, technology advancement, improvement of transportation, investment, clean energy sources, job creation, employment... The soft infrastructures such as government policy, level of understanding and role of community social workers may also interact with the independent variable to influence rural community development.

### RESEARCH METHODOLOGY

It presents the research design and the target population. It also discusses sample, sampling techniques, sample size and its compositions, instruments of data collection, methods of instruments administration and methods of analysis. It finally highlights the limitations encountered, the validity of research instruments, the data processing and analysis, and ethical considerations.

### Research Design

This study used a descriptive design. It was based on a combination of two approaches, namely quantitative and qualitative approaches. The quantitative approach served us with a clear scope of

the existing infrastructure in rural areas from the different classes of respondents, while the qualitative approach helped us in figuring out the reasons and the impact of infrastructure suggested by the respondents. Qualitative studies allowed the researcher to explore behaviors, perspectives, feelings, and experiences in depth, quality, and complexity of a situation through a holistic framework. In contrast, quantitative research is a formal systematic approach which incorporates numerical data to obtain information about the world.

### **Target Population**

The target population comprised the inhabitants of Gicumbi district. They were estimated to 395,606. There were no exclusion criteria.

### **Sample Size**

The sample size of this study was selected based on Slovin's formula of determining sample size as follows:

$$n = \frac{N}{1 + N * (e)^2}$$

Where n = Sample size; N = Total population; e = Error tolerance

Taking the confidence level of 90.9%, thereby giving a margin error of 9.1%, the sample size was determined as follows:

$$N = 395,606 : 3,277.013286 = 120.7215124$$

The sample size was 120 people Although the margin error is more than 5%, it was not too big to increase the size of the sample.

This research targeted the population of Gicumbi District, in the Northern province of Rwanda, specifically in Manyagiro, Rukomo, Kageyo and Mutete sectors. Thus, the following categories of people were interviewed: The Mayor of the District, four Executive Secretaries of Sectors, 40 local business people, 40 farmers, and 40 young people.

### **Sampling Techniques**

A simple random sampling will be used to sample the local business people, youth and farmers. This technique will provide equal chance for each group to be sampled. 40 respondents will be selected among farmers: 40 respondents among youth group and 40 local businesspeople. This sample will provide the information that can be applied to the rest of the population because of the homogeneous characteristics. Purposive technique will be also used to get responses of the Mayor of Gicumbi district and executive secretaries of four Sectors. The reason to proceed with a simple random sampling within four Sectors in Gicumbi District, just because these Sectors reflect the reality of being in remote areas. Thus, it will help to identify the needs of rural community, and how infrastructure and human development would impact towards economic development.

### **Data Collection Methods**

As previously stated, this research carried out a qualitative study. To do so, it required one round of open ended, semi-structured, in-depth interviews. Open-ended interviews allow participants to discuss their opinions, views, and experiences fully in detail whereas perhaps a set interview with closed ended questions may inhibit them to express their full opinions and feelings. With the use of semi-structured interviews the researcher has prepared a certain amount of questions.

### **Interviews**

A face to face interview allows the researcher to observe any non-verbal communication but also allows both the interviewer and participant to seek any clarification necessary. Interviews were carried out in a conversational style to the local administrators. The interviews consisted of open-ended questions, uniquely developed by the researcher for the sole purpose of this study. The interviews were estimated to take at least 20 minutes per each person. However, these interviews and times were merely a guide or structure to the interview sessions; it was the participant's responses which led the direction and length of the interview. The interviews were carried out over a period of two weeks which allowed the researcher to reflect and make adjustments as necessary. Indeed, interviews were conducted in a flexible manner to allow free expression of respondents' views.



### Questionnaire

The questionnaire was translated and administered in Kinyarwanda according to the preference of research participants.

Questionnaires were given to the local businesspeople, farmers and youth. Therefore, the study was designed as standardized questionnaire basing on set objectives of this study. In depth, a research was conducted to get insights on the actual contribution of infrastructures to the development of rural areas as well as the obstacles the government of Rwanda still faces in achieving the objectives of developing rural community areas. The questionnaires also generated data on other issues such as the future strategies to be pursued to ensure that rural infrastructure is potential in promoting human development in rural areas.

### Focus Group

This technique helped in gathering in-depth attitudes, beliefs, and anecdotal data from the respondents. This technique was effectively used to focus on details regarding issues found through data collection methods.

### Data Analysis

Data analysis was in conjunction with data collection as interviews were being conducted; gathered data were synthesized, interpreted, and communicated to give meaning to it. According to Veryard (1984), qualitative data analysis occurs in three phases: description, analysis and interpretation. The coding method of grouping data by group and making tables was used. The research transcribed the interviews and analysis of the transcripts was carried out by the researcher.

## RESEARCH FINDINGS AND DISCUSSION

This section of findings is based on three specific objectives of the study: the assessment of the influence of existing hard infrastructural facilities on rural community development in Rwanda, the assessment of the contribution of existing soft infrastructural facilities on rural community development in Rwanda and the determination of the challenges associated with infrastructures in accelerating rural community development in Rwanda.

### Assessment of the Influence of Existing Hard Infrastructural Facilities on Rural Community Development in Rwanda

In order to evaluate the relationship between existing infrastructures and rural community development in Rwanda, the first question was formulated in such a way that the respondents identify the main hard infrastructures established in the last 5 years in their district as well as the influence of such infrastructural facilities on rural community development. Their answers are illustrated in table 1

**Table 1: Hard infrastructural facilities availability**

Hard infrastructure	Strongly agree & satisfied	Frequency	Strongly disagree	Percentage
- Transport (roads)	84	70	36	30
- Energy (electricity)	11	9.2	109	90.8
- Telecommunications (mobile phones)	77	64.2	43	35.8
- Basic utilities (Drinking water)	109	90.8	11	9.2
- The existing infrastructures mentioned above influenced current community development in my area	28	23.3	92	76.7
- More strategies are needed to boost more infrastructures thus, community development.	120	100	0	0
<b>Total</b>	<b>120</b>	<b>100</b>	<b>120</b>	<b>100</b>

Source: Researcher, 2022.

Table 1 shows that 70% of the respondents stated that their roads are in a good condition, 9.2% use electricity as a main source of power, 64.2% use mobile phones in terms of Information and Communication Technologies (ICT) and 90.8% have access to improved drinking water.

These results show how the government of Rwanda, through the Ministry of Infrastructure (MININFRA), continues to invest heavily in infrastructure. This is also emphasized by its commitment where almost a tenth of Rwanda's annual budget is committed to transport and other infrastructures. Thus, the transport sector in Rwanda in general and particularly in Gicumbi district, has greatly improved over a decade. The transport sector system centres primarily on the road network. The whole country has a fairly good road system with approximately 14,900 kilometers (km) of roads. For the most part, the primary roads are well maintained, but feeder roads have deteriorated due to the lack of maintenance. Over 1,210 Km are paved and in good condition. The sector contributes about 7% to the Gross Domestic Product (GDP) representing about 15% of total service delivery. Currently, 86% of roads are in good condition.

Gicumbi District, which is the focus of this study, is one of 5 districts composing the Northern Province of Rwanda. It is located in the East of the province and spreads over 867 km<sup>2</sup>. With 395,606 inhabitants (418p/km<sup>2</sup>), that district is composed of 21 sectors, 109 cells and 630 villages; the population is more rural than urban.

Water supply and sanitation in Gicumbi district is characterized by a rapid increase in access over the past years, aided by a clear government policy and significant donor support. Therefore, this district access to improved water sources is relatively high with 31.9% of piped water. The majority of the population consumes water from protected springs that constitute 58.9% of the sources. Other source includes protected well and rain water.

However, this study has found out that this district has limited usage of energy at all levels. The majority of the population in the district use firewoods as a main source of power, while only 9.2% of the district population use electricity.

In terms of ICT, there is an increasingly high number of mobile phone users. Infrastructures of 2 telecommunication companies, such as stations and antennas are available in Gicumbi and the networks of those companies (MTN and Airtel) cover more than 95% of that district. Moreover, those companies have established a remarkable network of distribution points of their products/services throughout the district.

In terms of health care, the district has 25 health facilities including a referral hospital and health centers. In education sector, available infrastructure is enough to serve the whole community and the Government facilitates access to education through the program 9YBE (Nine Years Basic Education).

From these results, it is obvious that considering poor infrastructures in Gicumbi District the way is long for the government to be currently focusing on poverty reduction, privatization of government sectors, expansion of the export products and liberalizing the trade policies.

It is important to mention that the results from the interview conducted with the authorities of Gicumbi district revealed that Rwanda has implemented its second Economic Development and Poverty Reduction Strategy (EDPRS II) to guide the country's medium-term development aspirations over the period 2013/14 to 2017/18. The overall objective of EDPRS II was to increase the quality of life of all Rwandans through rapid and sustainable economic growth (11.5% per annum) and accelerated poverty reduction (to below 30%). To meet these objectives, EDPRS II was developed around four strategic thematic areas (Economic Transformation, Rural Development, Productivity and Youth Employment, and Accountable Governance), which were supposed to drive rapid and sustainable economic growth, as well as fast poverty reduction. EDPRS II was implemented through a set of District and Sector Strategies, which were linked and fully aligned to the district priorities that were elaborated and set out clearly in the District Development Plan (DDP).

Specifically, in Gicumbi District, the targeted overall objective of its DDP (2013-2018) was to increase the revenue of each home and the better quality of life of the population in general but particularly

that of the majority poor. The district focused primarily on the five sector priorities that were deemed to be the fundamental sector for the development of the district. These priorities include agriculture and livestock, transport, roads construction and maintenance, energy, water and sanitation.

Table 1 also shows that when the respondents were asked to explain if they see any impact on the community development, only 23.3% of the respondents agreed that there is a noticeable impact of existing infrastructures on the development of their district while 76.7% of the respondents disagreed.

Indeed, as the majority of the respondents asserted, this study has found out that there is not any significant difference in the wellbeing of Gicumbi residents between before and after infrastructural facilities availability. There is a prevalence of extreme poverty because there is a significant number of adult-equivalent persons whose annual consumption of food products is lower than the extreme poverty line, expressed as a percentage of total adult-equivalent persons in Rwandan society.

The study has learned from local leaders in Gicumbi district that 44% of the children suffer from stunting because of a lack of adequate nutrition. The poverty levels in the district are high compared to the national levels, with 49.3% of the population under poverty line and 33.9% of the population in extreme poverty.

The local leaders have identified various challenges contributing to the high rates of poverty in the district, such as a high percentage of female-headed households, a high increase of the population, inadequate water and poor sanitation, high rates of soil erosion, poor waste management and high unemployment rates where 71.8% are unemployed as small scale farmers. These challenges are exacerbated by a low productivity of agricultural and animal production, weak organization within commodity agricultural value chain development, low levels of agricultural research and lack of demand-driven research for farmers, a lack of access to finance by farmers in financial institutions and a low involvement of the private sector investment in agriculture sector.

**Table 2: Respondents' Views on the contribution of existing soft infrastructural facilities**

Soft infrastructure	Strongly agree & satisfied	Frequency	Strongly disagree	Percentage
- Policies and institutional frameworks	90	89.2	30	10.8
- Systems and procedure	70	58.3	50	41.7
- Governance mechanisms	72	81	48	19
- Social networks	95	79.1	25	11.9
- Transparency and accountability of financing system	42	35	78	58
- Transparency and accountability of procurement system	35	29.1	85	70.8
<b>Total</b>	<b>120</b>	<b>100</b>	<b>120</b>	<b>100</b>

**Source:** Researcher, 2022.

Table 2 indicates that 89.2% of the respondents agreed that policies and institutional frameworks were good, 58.3% of the respondents agreed that systems and procedures were also good, 81% of the respondents were satisfied with available governance mechanisms and 79.1% of the respondents were satisfied with available social networks. However, only 35% of the respondents agreed that there is transparency and accountability of financing system, and only 29.1% of the respondents agreed that there is transparency and accountability of procurement system.

These results show that Rwanda has opportunities to strive for a high achievement in all sectors of the economy. The construction industry as a distinct sector, which makes a significant contribution to GDP, serves as a central delivery mechanism in the generation and quality of all economic and social development activities. For a better performance, the country is increasing in rural areas basic infrastructure in all sectors, including transport, communications, housing and buildings, water and

sanitation, energy, health, and agriculture. Rwanda has put in place appropriate macroeconomic, structural and social policies, which have contributed to improved infrastructure and some progress towards meeting the MDGs. The Rwandans know what needs to be done to accelerate growth, reduce poverty and promote sustainable development. Their initiatives are allowing the country to improve governance, assume leadership and accountability for its development and increase trade within the country.

However, in Gicumbi district, starting in the pre-dawn hours, many women must walk long distances to the nearest water supply. They cook with inefficient technologies, utilizing wood that is cut farther and farther from the village. At the same time, they are subjected to fumes that can damage their lungs and eyes. Family efforts to rise above subsistence are limited by poor access to markets, supplies and vital information. The rural employment is constrained by the lack of electricity. In the evening, children who go to school must read and do their homework by unclear lighting provided through expensive and often polluting sources.

It's obvious that Rwanda lacks capital. In the framework of a debt-cycle hypothesis, it is expected to borrow and use foreign savings to increase domestic investment and growth. However, the Government of Rwanda tends to concentrate responsibility for providing public utility services in one provider: the public administration with its different ministries.

Therefore, an appropriate actor should step in to take responsibility for implementing one or several of the components, depending on circumstances, objectives, and the nature of the good or service. The extent to which multiple agents share authority and responsibility for planning, producing, delivering, and financing private and public services is an important feature of a pluralistic governance system.

In order for this study to identify the gaps between the basic services that should be available to the residents of Gicumbi district according to government policy and those that are accessible to them, a question was asked in such a way that the respondents suggest needs that might be overlooked by government policy.

**Table 3: Respondents' views on the challenges associated with infrastructures in accelerating rural community development**

To determine the challenges associated with infrastructures	Strongly agree	Percentage	Strongly disagree	Percentage
Lack of community engagement to maximize utilization of existing infrastructure towards their development	91	75.8	29	24.2
Lack of community engagement and alignment with stakeholders to drive inclusive economic growth and social benefits	76	63.3	44	37.7
Government institutions do not provide fair and efficient environment for business and the pursuit of happiness	58	48.3	62	41.7
Poor distribution of infrastructures	61	50.8	59	49.2
Lack of infrastructure maintenance	83	69.2	37	30.8
<b>Total</b>	<b>120</b>	<b>100</b>		

**Source:** Researcher, 2022.

Table 3 indicates that 75.8% of the respondents stated that there is a lack of community engagement to maximize utilization of existing infrastructure towards their development, 63.3% of the respondents mentioned a lack of community engagement and alignment with stakeholders to drive inclusive economic growth and social benefits, 48.3% of the respondents blamed the Government institutions for not providing fair and efficient environment for business and the pursuit of happiness, 50.8% of the respondents argued that existing infrastructures are poorly distributed while 69.2% of the respondents stated that there is a lack of infrastructure maintenance.

This study has discovered that the mountainous topography and steep ravines make Gicumbi district prone to landslides that cause the destruction of physical infrastructure downhill and downstream. In addition, it was revealed that the roads network in the district is unequally distributed, where some sectors have access to roads while others do not. The majority of the roads are feeder roads that link one sector to the other. However, these are not sufficient especially for a productive district like Gicumbi whose produce would be a waste without road links to the nearest markets. This substantially reduces incomes of the farmers and negatively affects trade.

It was also unfortunate to learn that there is poor management of rural water supply schemes that are already in place and the health care systems in Gicumbi are inadequate because most of the facilities lack the necessary equipment and personnel to enable them provide quality service to the people.

During his research, the researcher was shocked to learn that Government institutions failed to provide fair and efficient environment for business and the pursuit of happiness, when they decided to abruptly close the border between Rwanda and Uganda for three consecutive years (from February 28, 2019 to January 30, 2022). As a result, developed infrastructures, especially roads and buildings, were temporarily rendered useless. The residents of Gicumbi, especially businesspeople, who benefit a lot from trans-border trade were devastated by such a decision because many businesses were bankrupt.

Many people's livelihoods were negatively affected by that decision because they shifted from bad to worse. It's necessary to note that there is a high level of poverty incidence (55.3%) and 24.7% of extremely poor people in Gicumbi District. So, a significant number of people depend on Vision Umurenge Program (VUP) direct support and public works.

## **CONCLUSION**

Infrastructure plays an important role in promoting rapid economic growth and making this growth more inclusive, by sharing the benefits of growth with poorer groups and communities, particularly in remote and poor areas. Infrastructure facilitates the poor's access to basic services and helps increase their income generating capacity. There are many ways in which infrastructure directly affects lives of people in villages and poor habitations and has a direct and specific service to provide local road connectivity, a local school and a local water management program.

This study results agree with other research findings by different authors on the development of rural community brought by the infrastructural facilities availability. A positive relationship between infrastructural facilities availability and development of rural community was established. The availability of quality infrastructure in Gicumbi guaranteed increase in production and productivity. Existing infrastructure ensured easy movement of goods and raw materials, thereby, reducing inefficiencies and led to efficient utilisation of scarce resources. However, it was revealed that the roads network in the district is unequally distributed, where some sectors have access to roads while others do not. This substantially reduces incomes of the farmers and negatively affects trade. It was also unfortunate to learn that there is poor management of rural water supply schemes that are already in place and the health care systems in Gicumbi are inadequate because most of the facilities lack the necessary equipment and personnel to enable them provide quality service to the people.

Moreover, it was also learnt that Government institutions failed to provide fair and efficient environment for business and the pursuit of happiness, when they decided to abruptly close the border between Rwanda and its neighboring country in the North for three consecutive years. As a result, developed infrastructures, especially roads and buildings, were temporarily rendered useless. The residents of Gicumbi, especially businesspeople, who benefit a lot from trans-border trade were devastated by such a decision.

## **Recommendations**

The Government of Rwanda should not concentrate responsibility for providing public utility services in one provider; an appropriate actor should step in to take responsibility for implementing one or

several of the components, depending on circumstances, objectives, and the nature of the good or service.

The local community should be sensitized on how to be engaged and aligned with stakeholders in order to maximize utilization of existing infrastructure towards their development.

Government institutions should provide fair and efficient environment for business and the pursuit of happiness; any acts of rendering useless existing infrastructures, including closing borders, should be discouraged.

Government policies concerning infrastructure should be revised to include a fair distribution and guidelines for appropriate maintenance.

### ACKNOWLEDGEMENT

To God be the Glory for His good plan for me, and His mercies endure forever. I thank God for his protection from the beginning up to the end of this course. My special thanks go to my supervisor, Dr. Eugenia Nkechi Irechukwu, who accepted giving her time for a practical guidance for my research work. The completion of this work has been a result of knowledge acquired from teachers, whose efforts I still acknowledge. My gratitude goes to Compassion Rwanda Office for its financial support and words of encouragement during my studies. My appreciation goes to my brother Emmanuel Kwizera for his constant support. The researcher is heavily indebted to the respondents for their collaboration; without their contribution, no doubt this research would not been successful. I owe my special social development thanks to all those with whom we have interacted at different levels. May you always aspire to provide appropriate models to promote what it requires to be human.

### REFERENCES

- Advanced Information Networking and Applications (AINA). (2006). *Improving Social Infrastructural Facilities in the FCT Secondary Schools: Focus on Government Secondary Schools. Kaduna: Unpublished PGDE Project in the National Teachers' Institute.*
- Bangamwabo, A. (2022). Government Revenues and Infrastructure Development in Rwanda: A Case of Kicukiro District. *Journal of Advance Research in Business Management and Accounting, Vol. 8 No. 2 (2022). ISSN: 2456-3544.* Retrieved March 9, 2022 from <https://nnpub.org/index.php/BMA/article/view/1075>.
- Calderon, C. and Serven, L. (2004). *The Effects of Infrastructure Development on Growth and Income Distribution.* Washington DC: World Bank.
- Fan, S. (1999), *Linkages between Government Spending, Growth Poverty in Rural India.* Washington D.C: International Food Policy Research Institute (IFPRI).
- Jahan, S. & McCleery, K. (2005), *Making Infrastructure Work for the Poor—Synthesis Report of Four Country Studies.* New York: United Nations Development Programme.
- Leipzig, D. (2003). Achieving the Millennium Development Goals: The Role of Infrastructure. *World Bank Policy Research, working paper.* Washington, D.C.: World Bank.
- Ndulu, B.J. (2006). Infrastructure, Regional Integration and Growth in Sub-Saharan Africa: Dealing with the Disadvantages of Geography and Sovereign Fragmentation. *Journal of African Economies, vol 15, AERC supplement 2.*
- Pouliquen, O. (1999), *Rural Infrastructure from a World Bank Perspective – Knowledge Management Framework. The World Bank Environmentally and Socially Sustainable Development – Rural Development.* Washington DC: World Bank.
- Ribot, J.C. (2003), *Framework for Analysis of Community-Driven Development*". Retrieved September 7, 2021 from <https://onlinelibrary.wiley.com>
- Veryard, R. (1984). *Pragmatic data analysis.* Oxford: Blackwell Scientific Publications.
- Waeli, A. H., & Mahdi, H. F. (2017). Standalone PV systems for rural areas in Sabah, Malaysia: Review and case study application. *International. Journal of Computation and Applied Sciences, 2(1), 40-45.*
- Yilmaz, B, Desdemir, I, Atmis, E, & Lise, W. (2010). Factors affecting rural development in Turkey: Bartin case study. *Forest Policy and Economics, 12(4), 239-249.*