



**ROLE, PURPOSES OF REAL ESTATE VALUATION AND THE IMPACT ANALYSIS ON ECONOMIC DEVELOPMENT IN RWANDA**

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**ABSTRACT**

The study analyzes the impact of real estate valuation on economic development in Nyamirambo sector located in Nyarugenge district in the city of Kigali. Specific objectives of this research are to analyze the role of real estate valuation, to examine the determinants of economic development and to explore the relationship between real estate valuation and economic development in Nyamirambo sector, Nyarugenge district. Simple random sampling techniques were used to select the sample size of 90 respondents. Primary and secondary data were collected using the questionnaires and interview. Collected data were analyzed using SPSS. The study revealed the factors influencing real estate valuation such as property type (36%), property age (26%), location (24%) and property size (14%). It was also revealed that the real estate valuation has different role such as providing real value of the property (40%), encouraging improvement of the property (30%) and determining large part of investment (30%). People request the valuation for various purposes such as sale (43%), for tax matter (29%) and for mortgage (28%). Real estate valuation in the case study had met the challenges of different things such as the rising of interest rate (48%), economic contraction (30%) and inexperienced management (22%). In Nyamirambo sector, the economic development we witness result from some determinants such as poor technology (45%), insufficient productivity (35%) and poor infrastructure (20%). Based on the research there is relationship between real estate valuation and economic development such as rising house price (34%), scarcity (18%), location (18%), permanence of investment (18%) and improvements (12%). The research results concluded that there is positive impact of real estate valuation on economic development in Rwanda especially in Nyamirambo sector, Nyarugenge district. The researchers recommended the government to collect taxes from leaseholders based on valuation report instead of basing on UPI and self-declaration of property values by the owners as this will help the profession of valuation be known and contribute to the development. Property owners were recommended to adhere to valuation reports for their decision making as it will increase their economic development and their living standards.

**Key words:** *Real Estate; Valuation; Economic Development*

## INTRODUCTION

The real estate valuation is a recent profession in Rwanda. Real estate valuation is the process of developing an opinion of value for real property usually market value real estate transaction often require appraisal. It requires the application of finance theory to be able to professionally make an informed decision. One of the major challenges facing the real estate valuation professionals is the development of reasonable assumptions for projections as these are based on historical trends. In addition to this, valuers need to make a reasoning choice of other things that are involved in the calculation of appropriate discount rate during the income projections. Appraisal reports form the basis for mortgage loans, settling estates divorces, taxation, and so on. Sometimes an appraisal report is used to establish a sale price for a property (French, 2004).

Real estate properties are important parts of human existence almost all human activities take place in communities with a major component of community been geographical space which is often in the homes, schools, industries, officers, and shopping centers and so on. Different categories of stakeholders invest in real estate asset for future income in the form of rents or capital gain. During the life cycle of real estate asset most rational investors usually required the valuation of asset to evaluate the performance of their investment for merger and acquisition for take over for financial reporting to determine rental values, to ascertain the capital value of a property for property taxation, for mortgage transaction, among others (Fairbairn, 2014).

There exist a number of property valuation methods that have been widely used both in theory and practice these approach have been categorized into traditional and advanced valuation method .tradition method are based on same form of comparison with the other comparable properties in arriving at market value and usually require a small number of a comparable properties in their application meanwhile the advanced method usually mimic the through process of the real estate stakeholder and require a sizeable number of historical transaction data to estimate property value (De Sousa, 2009).

Scholars have argued that the advanced valuation method tend to produce accurate and reliable property valuation estimate when comparable with traditional method. Although no property valuation method can handle all real-life valuation problems, the plausible reasons in favor of the advanced method is that they can handle the non-linear relationship between property value and property determinants, generalization capabilities and not subject in the nature, among the others. The type of valuation approach that being adopted by values practicing in the country is dependent on the number of factors such as their education background, culture, experience, exposure and so on (Üstün, 2006). It has also been established that the type of property valuation method adopted in a country could affect economy of the country and overseas countries too. When this effect is negative, it could lead to a global crisis. For instance, the global financial crisis that occurred between 2007 and 2009 was traced to real estate industry where it was argued that subprime mortgage lending started in the USA and spread around the world was as a result of the application of inappropriate and unreliable property valuation approach and the established that the 1997 Asian crisis could be linked to the activities in the real estate sector ((mortgager system) (Simmons, 2004).

As Rwanda is moving to the meddle income country, the economic development is driven by the economic and structural reforms and strong international support. The Fast grow observed is achieved through the Rwanda's national strategy for transformation to reach on middle-income status (Soderstrom, 2007). As far as this study is concerned, the three commonly cited financial drivers of the value creation are sale, costs, and investments and these have relationship with the economic development. Earnings growth, cash flow growth, and return on invest capital are specific financial drivers, profitability, growth, and capital intensity are considered as important drivers of free cash flow and value of a firm. In Rwanda, the real estate valuation most of time takes place when there is an expropriation to implement the projects responding to public interests. Many years ago, it was noticed that many property owners do sale and rent and others buy properties without the help of professional valuers. This situation impacts negatively the economic system of the country (Sun, 2013). Most of the property owner do not have ability to participate in the valuation of their property. Depending on the worth of their property, this can negatively impact their economic development and the country respectively.

The time the real estate valuation took place in the country since 2010 when the Institute of Real Property Valuation was established, since then there is improvement in the economic development as many people are involved in bid projects where the valuation profession helps them in one way or another. Valuation is a profession that helps people to determine the accurate value or price of an asset. When the prices or values of any asset are determined accurately, the economy of the country can improve without doubt. The reason of this is because the property owners

will pay property taxes depending on their values, location, size, types, and also people sale and rent their properties depending on value assessed by valuers. On the other hand, there is a gap in the study carried on real estate valuation on economic development and this is the focus of this study. To conduct this study, researchers analyzed the impact of real estate valuation on economic development in Rwanda. This was achieved by looking at the role of real estate valuation, examining the determinants of economic development and exploring the relationship between real estate valuation and economic development in the case study of Nyamirambo sector, Nyarugenge district, Kigali City. Researchers went to the field with the hypothesis which assumed that there is positive impact of real estate valuation on economic development in Rwanda because the property owners sell and rent while others buy the properties depending on the accurate prices or values of their properties and the payment of property taxes are made based on valuers' opinion of value.

## LITERATURE REVIEW

### **Different methods used in real estate valuation**

There are three approaches to the value real estate which are comparable sale approach, a relative valuation method the other methods are called income approach, a time value of money-based method which included the direct capitalization method and discounted cash flow method and the last one is called cost approach which values real estate at its replacement cost. Just like any other asset real estate value must correspond to its capacity to generate income future cash flows the easiest approach is to value property is to base it on the value actually assigned to the other properties in the market for example the comparable sale approach. However, because no two properties are the same and significant differences exist between properties, this approach is not appropriate for all property and must be used with caution (Lin, 2007)

#### *i. Comparable sales approach*

The comparable sales approach is a relative valuation method. Just like find out price multiples for different stock for example price to earnings ratio (P/E), price to book ratio (P/B ratio) in the comparable sales approach we identify past transactions of comparable properties and use them as benchmark to determine value for our property, comparable sales approach involves the following steps such as identifying actual market transactions in recent past of comparable properties. Finding price multiple for the properties based on some feature of property of which derives the property value (Özsoy, 2009).

#### *ii. Income approach*

The income approach is an absolute valuation method there are two variants of the income approach the simpler direct capitalization approach and more advanced discounted cash flow method. The direct capitalization method values a property as a perpetuity for example an infinite stream of cash flows. It is similar to the Gordon growth model. This method the value of the properties obtained by used the direct capitalization approach can be worked out using the different formula, the discounted cash flow approach forecasts net operating income (NOI) for foreseeable future by individually forecasting the revenue and expense line items (Michaletz, 2018).

#### *iii. Cost approach*

The cost approach of values a property at its replacement cost for example the cost that was be incurred in reconstructing the property. The value of a property under this approach equals the market value of the land on which it is constructed plus the cost of construction of the similar (Vayas-Ortega, 2019) property at current price. This approach has a major theoretical weakness because it determines value of totally new property which may have lower repairs and maintenance cost as compared to old property. So, this is the last method of valuation from the three discussed in above paragraph.

### **Importance of real estate valuation**

Valuation is required for number of purposes including buying and selling of property, development appraisal, monitoring the level of property performance, loan security, tax matters, company accounts and insurance reinstatement The lack of central trading market and the opaqueness of the market mean that the investors in real estate are not able immediately to obtain a valuation of the asset. Instead, investors in rely on independent values to provide this service. The purpose of valuation and the type of property that is to value was determine the basis of the valuation and the techniques that should be employed. The basis of valuation, for examples "Market value", or "Market Rent".

The main requirement of the major investors is for performance measurement and valuations provide the data for this to be carried out. Information on capital value (Shapiro, 2019).

Market rent and the component, which have driven performance, such as yield shift and rental growth, provide the level of information needed to analyze the performance of real estate investment over different period. It is also an important to have real estate valuation because of guide us to factors that can be considered during buying and selling the property such property location, valuation of the property, expected cash flows and profit opportunities, new construction vs. existing property, indirect investment in real estate and the overall real estate market so all this factors are considered during buying and selling property, without having real estate valuation cannot have this factors that is an important during buying and selling the property (Ullah, 2019).

The first factor which is the property location is an important because of location is still king and continues to be the most important factor for profitability in real estate investing. But on the valuation of the property is an important for financing during the purchase, listing the price, investment analyses, insurance and taxation they all depending on real estate valuation and the next factor is expected cash flows and profit opportunities this factor refers to how much money is left after expenses. Positive cash flow is key to good rate of return on an investment property. And then there is other factor called new construction vs. existing property the new construction usually offers attractive prancing, the option to customize, and modern amenities. Risks delays, increasing cost and the unknowns of newly development neighborhood (Mejia, 2002).

Existing property offer convenience, foster access, established improvement such as utilities, land scoping etc. and in many cases lower costs. And also, we have the other factor called indirect investment in real estate normal managing physical property long term horizon is not for the alternative exist that allow us to invest in real estate sector indirectly the following factor is the credit score the credit score affecting ability to qualify for mortgage and it is impact the term your lender offers. If you have higher credit score, you may get better term, which can add up to substantial saving over time. The last factor is overall real estate market as with other types of investment, it is good to buy low and sell higher – real estate market fluctuation and it pays to be aware of trends. It is also important to pay attention to mortgage rate so you can lower your financing cost if possible (McKerchar, 2009).

### **Economic impact of real estate valuation**

In developed market economies, the function of the real estate market in allocating and reallocating land resources, is probably its most important contribution to economic prosperity. The market is the means of access to real estate and tends to ensure that there is a range of opportunity and choice in terms, for example of location, types of premises, tenures, terms and conditions for occupancy across economic sectors. Most economic activity requires land. If a country's economy is to grow and prosper in a sustainable manner. There needs to be mechanism whereby land resources are allocated to satisfy the demand of productive sector. This implies that land was also be real located efficiently from those whose use is less productive to the more productive sectors (Stiglitz, 2005).

Market forces achieve this through the process by which different parties bid for the available resources. The most productive users are able to make higher bids than the less productive so that resource tend to be allocated to them for market forces to achieve this efficiently there should be the minimum of interference from the state as such intervention can distort resources allocation and undermine the efficiency with which the process functions (Newman, 2001). A mature real estate market can act as store of wealth by providing opportunities for investment in property assets. Real estate is one of a number of competing investment vehicle. Opportunities to invest in it permits increased opportunities for diversification of portfolios. Real estate has characteristics which are not wholly duplicating by other investment, for example its longevity and immovability make it a valuable store and wealth on long term basis. This makes real estate an important part of portfolios whose objectives include provision for the distant future, for example pensions or inheritance. Real estate can be used in ways independently of any occupancy of it by owner.in particular, land can be used as collateral to support borrowings (Oyewole, 2014).

In these ways the real estate market and financial sectors become interdependent this can be both a strength and a weakness for the wider economy the use of real estate as collateral enables firms and households to realis part of their wealth in real estate to enhance investment or consumption. The weakness is that in times of recession in the property market this is not possible so that investment and consumption is depressed .at times when an economy is overheating, the realization of wealth from real estate can add to inflationary and balance of payment pressures. Government therefore needs to monitor the real estate market and where necessary take corrective action where their behavior many undermine macroeconomic targets (He, 2000).

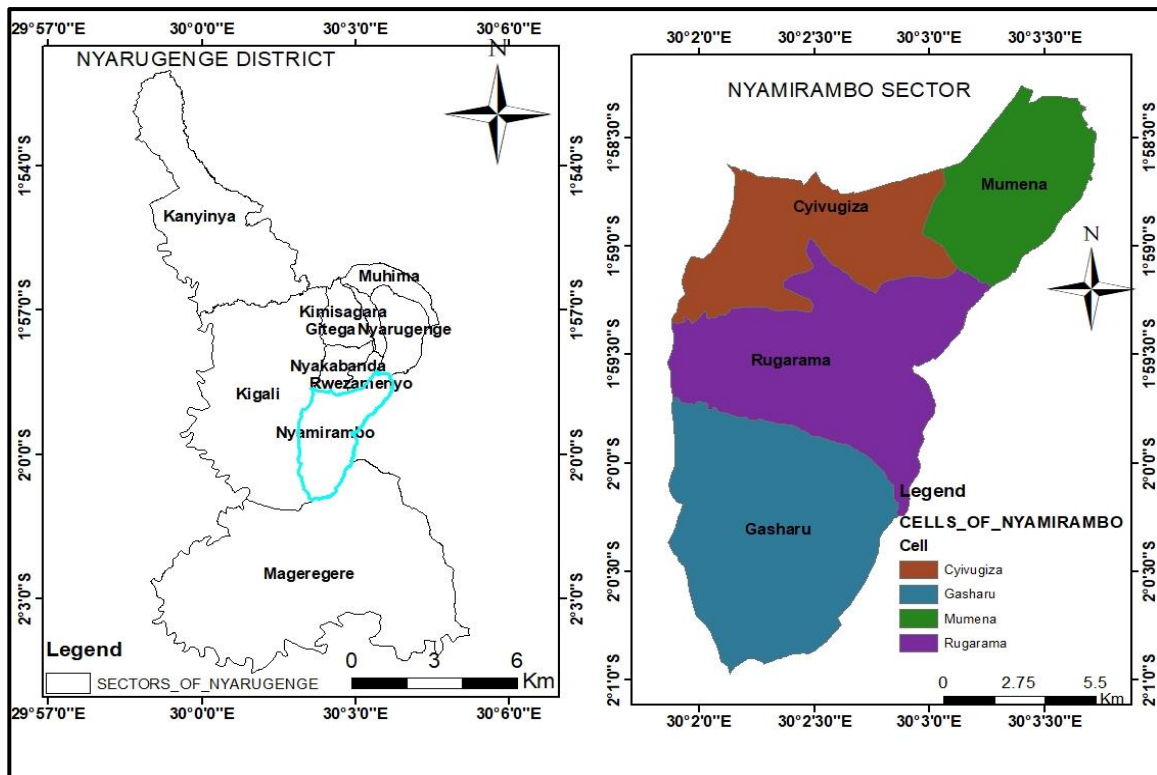
**Determinants of economic development**

The determinants of economic growth are inter-related factors influencing the growth rate of an economy. There are six major factors that determine growth with four of them been grouped under supply determinants and the other two are efficiency and demand. The four supply factors are natural resource, capital good, human resource, and technology and they have direct effect on the value of goods and services supplied the economic growth measured by GDP means the increase of the growth rate of GDP, but what determine the increase of each component is very different. Public expenditure, capital formation, private and public investment, employment rates, exchange rate all this have different impacts on economic growth and should take into account that those these determinants have different implication if the states are developed or not (Boldeanu, 2015).

**METHODS AND MATERIALS**

**Description of the study area**

The description of the study area includes describing a field of study or selected studios activity. Figure 1 indicates the case study of Nyamirambo sector with its four (4) cells such as, Mumena, Cyivugiza, Rugarama, Gasharu.



**Figure 1:** Description of the case study

**Research designed and methodology adopted**

The research design adopted here highlighted the arrangement of condition or collection descriptive example are case –study naturalistic observation, survey correlational for example case-control study observation study experiment for example field experiment, controlled experiment, quasi-experiment review literature review, systematic review. The population of the case study consists of both male and female where the number of male equal to 20,290 while female equal to 20,002 and the age group are classified by the following group (class) [0-14years] equal to 13,446 [15-64 years] equal to 26,218 [65+ year equal to 628 and the urbanization is all population 40,292 and the other thing is about the nationality of population the 39,963 are Rwandan while the 282 has the other nationality the marital status of population 16,638 are single, 10,662 are married and 1,944 are separate/divorce/ widowed.

Qualitative research was used in this study and focuses on quantifying the collection and analysis of data. Qualitative research was relying on data obtained by the researcher from the first –hand observation, interview, and questionnaire. In correcting data needed this research questionnaire and interview method used for primary data had collected and documentary review for the secondary had collected. During this study simple random sampling technique was take place where same criteria was set to be based. This study used Yamane’s formula to determine the sample size for household and confidence level of 90% and precision of 0.1 were assumed:  $N = N/1 + Ne^2$

Where n= represents the sample size

N= represents the number of households who were valued their property

e is the level of precision also called sampling error which range in the true value of population is estimated to be. Because of the population who was valued the property in Nyamirambo sector is the homogeneous the study used this sample size

$N=1000, e=0.1$

$n=1000/1+ (1000.0.01)$

$n= 90$

In this study, the data analysis took place where the process of systematically applying statistical and logical techniques to describe and illustrate, condense, and recap, and evaluate data was performed.

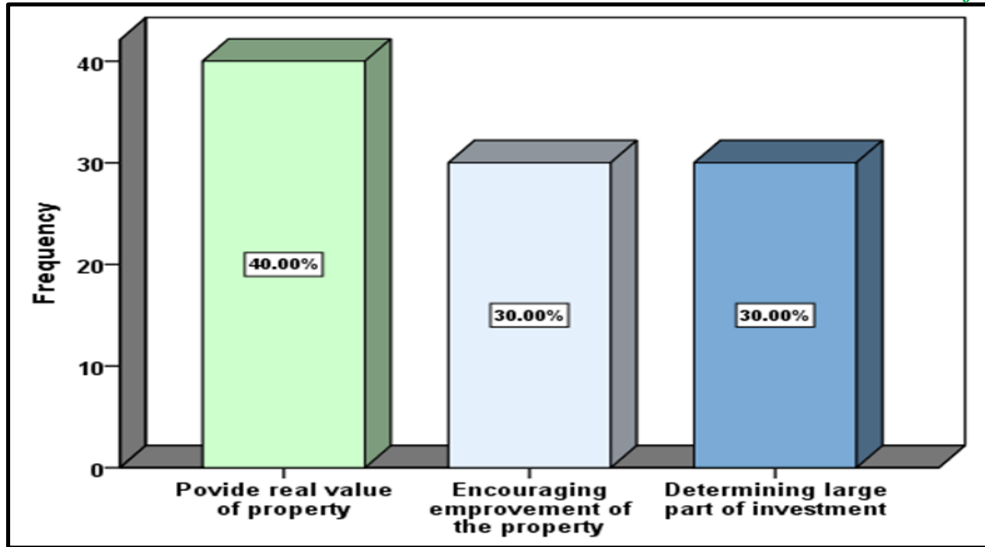
## **RESULTS AND DISCUSSIONS**

The household survey used random sampling technique which gave both male and female equal chance to be respondents. There was no discrimination among men and women therefore 71% of respondent were men while 29% were women. The number of men was higher than women because of the men were the family representatives. Both men and women were included to ensure that the validity and reliability of data provided for this research to attain its objects.

### **Findings on role, purposes and challenges of the real estate valuation in the case study**

#### ***Role of Real Estate Valuation***

Valuation has more than one role such as to provide real value of the property, encouraging improvement of the property, determining large part of investment. Real estate valuation was necessary for Nyamirambo sector because the case study is the one of the sector that consist of the mix and different types of building that required real estate valuation for improved the economy of the sector. The most things impact the real estate valuation in Nyamirambo sector was type of property and the property age, therefore valuation of real estate was necessary because in Nyamirambo sector there is different type of property and the property value depending of type of property and property age, and the properties in Nyamirambo has not the same age. Figure 2 shows how the respondents react on the role of valuation where they helped to knew the percentage of each role of valuation. The role that made the big percentage is providing real value of property as it scored 40% of respondent while the other two roles had the same percentage of 30% of total respondents.



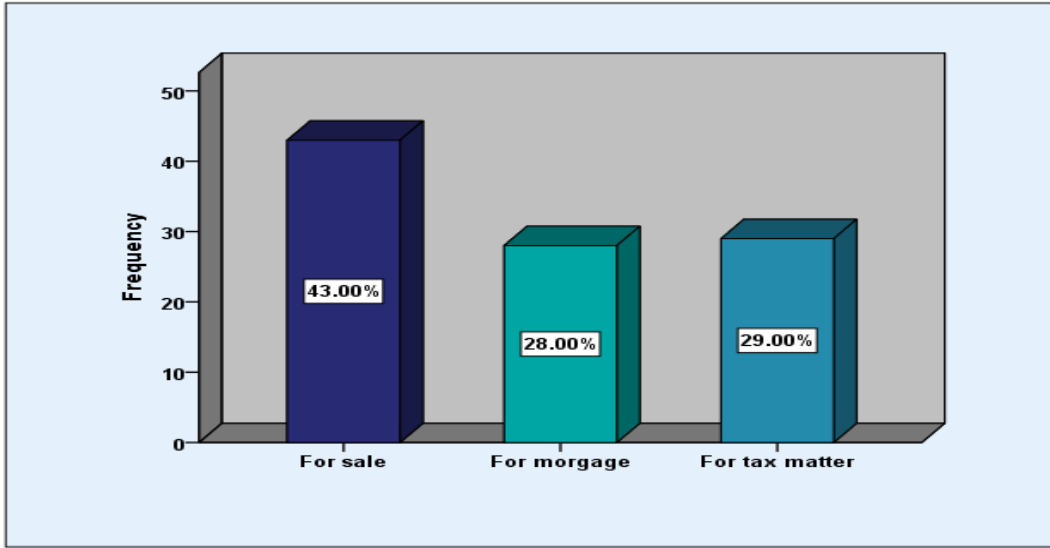
**Figure 2: Role of valuation**

It has also been established that the type of property valuation method adopted in a country could affect economy of the country and overseas countries too. When this effect is negative, it could lead to a global crisis. For instance, the global financial crisis that occurred between 2007 and 2009 was traced to real estate industry where it was argued that subprime mortgage lending started in the USA and spread around the world as a result of the application of inappropriate and unreliable property valuation approach and the established of 1997 Asian crisis could be linked to the activities in the real estate sector ((mortgager system) (Simmons, 2004).

***Purposes of Real Estate Valuation***

The study looked at the Purpose of real estate valuation and it was revealed that real estate valuation has more than one purpose such as sale, for mortgage, for tax matter and so many others. Many people in Nyamirambo sector do valuation in case they sell their properties and they do not care about the tax matter, and we cannot talk about economic development without property tax. This is why the local leaders of Nyamirambo sector have to put effort to their people to be aware of the tax of their properties to improve the economic development.

Figure 3 shows the purposes of real estate valuation and corresponding percentage. The sale purpose scored 43%, purpose for tax matter was 29% while for mortgage purpose had 28% of the total respondents. The big number of respondents were for sale purpose because everyone wanted to know the real worth of his/her property before selling it. The second purpose that scored high was the one of tax matter because property owners paid tax of their properties depending on the use of properties. The case study had many commercial properties that why the second percentage was made for tax property. The last purpose was the one of mortgage as it scored 28% because broowers before getting loan, they were asked to provide the valuation reports to banks before take their properties as collateral to loan.

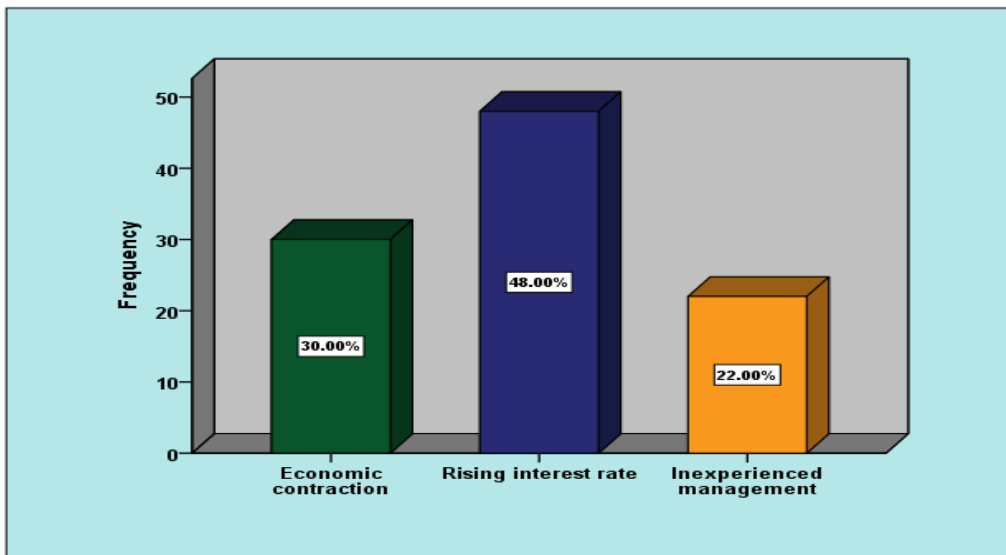


**Figure 3:** purposes of real estate valuation identified in the case study

The study revealed that, the valuations are required for a number of purposes including buying and selling of property, development appraisal, monitoring the level of property performance, loan security, tax matters, company accounts and insurance reinstatement. The lack of central trading market and the opaqueness of the market mean that the investors in real estate are not able immediately to obtain a valuation of the asset. Instead, investors rely on independent valuers to provide this service. The main requirement of the major investors is for performance measurement and valuations provide the data for this to be carried out. Information on capital value is based on the literature review (Chang, 2010).

***Challenges Faced by Real Estate Valuation***

In the case study, findings revealed challenges facing the real estate valuation. Real estate valuation in Nyamirambo sector had met the challenges of different kind such as the economic contraction (30%), rising interest rate (48%) and inexperienced management (22%) as indicated in figure 4.



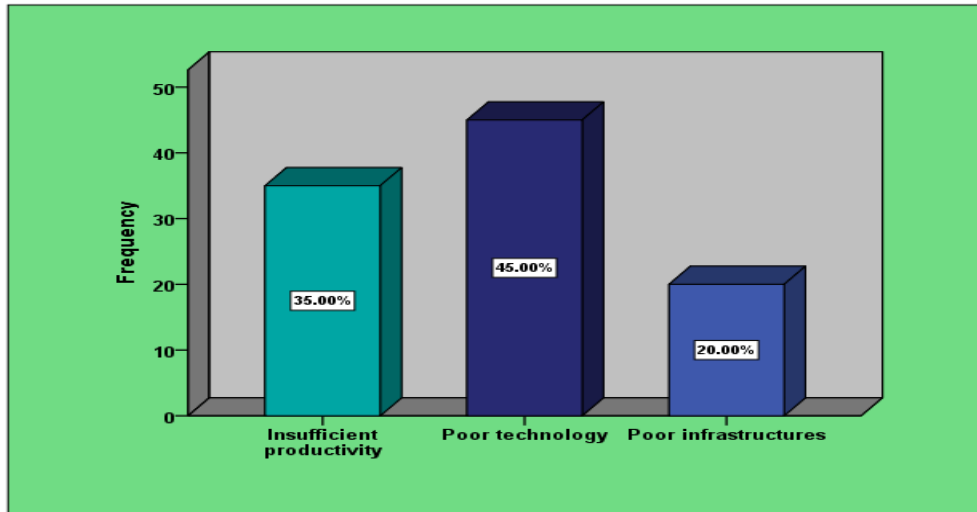


**Figure 4:** Challenges of the real estate valuation

**Findings on determinants of economic development and the relationship between the two variables in the case study**

**Determinants of economic development in the case study**

In the case study of Nyamirambo sector, the determinants of economic development identified are insufficient productivity (35%), poor technology (45%) and poor infrastructure (20%) and these caused the economy not to reach at 100% of economic development as it was the intention of residents as per figure 5.

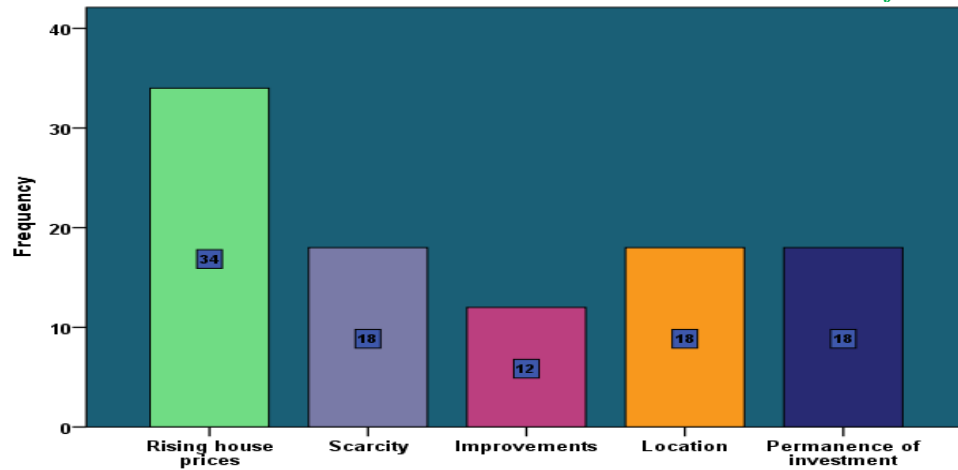


**Figure 5:** Determinants of economic development in the case study

Figure 7 indicated 3 determinants of economic development in the case study. The determinant that made the big number of respondents were poor technology as it scored 45% and the second one was the Insufficient productivity as it represented by 35% of respondents while the poor infrastructure was 20% of the respondents. Based on the literature review, the determinants of economic growth are inter-related factors influencing the growth rate of an economy. There are six major factors that determine growth with four of them been grouped under supply determinants and the other two are efficiency and demand. The four supply factors are natural resource, capital good, human resource, and technology and they have direct effect on the value of goods and services supplied to the economic growth measured by GDP. Public expenditure, capital formation, private and public investment, employment rates, exchange rate all this have different impacts on economic growth and should take into account that these determinants have different implication if the states are developed or not

**Relationship between real estate valuation and economic development in the case study**

Based on the research findings, there was a clear relationship between real estate valuation and economic development such as rising house price, scarcity, improvement location, permanence activity. This is because the rising of house price determined through the valuation has connection because they gain a good money from their real estate properties. Figure 6 shows the relationship between real estate valuation and economic development such as rising house price, scarcity, improvements, location, permanence of investment. The relationship that scored a bid number of respondents is the one of rising of house price as it has 34% of respondents while the other 3 relationship had the same percentage of 18% which was the scarcity, improvement, location while the permanence of activity was the last because it scored 12% of respondents.



**Figure 6:** Relationship between real estate valuation and economic development in the case study

Based on the literature review, the relationships is clear where the strength of real estate market and the health of country's financial sector can be most dramatically illustrated by looking at behavior in real estate market in time of banking and economic crisis the United kingdom's banking crisis of 1974 the Baltic banking crisis of 1995 and the more recent economic crisis. Economies were all significantly affected by the condition in the real estate market and its relationship with financial institutions.

When a banking system is over exposed to the real estate market through direct lending for commercial property development and house purchase and indirectly through loans secured on real estate, recession in the property market can result in banks being faced with non-performing loans secured against Assets that are now worth less than the value of the outstanding loans. This can result in crises both for individual financial institution and on accessions for the banking system as whole. This point to a need for careful prudential regulation of the relationship between the real estate and financial sectors.

### CONCLUSION AND RECOMMENDATIONS

This study aimed at analyzing the impact of real estate valuation on economic development in Rwanda with particular focus on Nyamirambo sector in Nyarugenge district. The study findings proved that there is a positive impact of real estate valuation on economic development in the case study. The real estate valuation increased the economic development because of the property owners sold and rented their properties based on values of their properties and others bought properties depending on the accurate price and this caused the economic development through the payment of proper tax.

Based on the above research findings, the Government of Rwanda through RRA was recommended to collect taxes for annual rental income and property taxes and land lease fees based on valuation report instead of basing on UPI as this can help people to know what is real estate valuation is and its purpose. Another recommendation was directed to IRPV to up updates their members on the contemporary issues in valuation for the quality and competency of the professionals. The district officials were recommended to be aware of the updates of market value of a buildings and improvements, surface of land before the district council determines the tax rate. This will help people to pay property tax depending on the value of their immovable properties and the district will collect real revenue as per property values. As the study discovered that the level of economic development was improved for the people who realized the important of real estate valuation, so property owners are recommended to depend on services of valuers when selling, mortgaging and renting their properties in order to improve their economic development and their standard of living.

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