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# ELECTRONIC COMMERCE AND PRODUCTIVITY GROWTH OF AGRO BUSINESS IN RWANDA

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## ABSTRACT

The study had the following specific objectives: to find out the elements of electronic commerce used by Maraba Coffee Cooperative, to identify the e-commerce strategies facilitating productivity growth of agro-businesses, and to find out the effect of electronic commerce on the productivity growth of agro-business. The methodology used was universal sampling and descriptive research. Primary data had been collected by using a questionnaire. Analysis has been done using SPSS version 16.0. Statistical measures used are frequencies and percentages. The findings from Table VI show the element of electronic commerce used by Maraba Coffee Cooperative. 28% of the respondents reported utilization of traffic building techniques, 24% of the respondents reported the creation of a positive customer experience, 20% of the respondents reported proving that your business is trustworthy, 16% of the respondents reported complete product information and 12% of them reported adequate on-site search engine. Table IX shows e-commerce strategies where 32% of the respondents reported interactive visualization, 28% of the respondents reported chatbots, 20% of the respondents reported advanced products, 16% of respondents reported more delivery options and 4% of them reported artificial intelligence. The findings from Table XV show that 28% of the respondents stated a wide variety of products equally to enhancement in digital products and services production, 16% of them stated lower cost than traditional shopping and selling, 12% of them stated less time-consuming and faster consumer consumption area, 4% of them stated transparent business system equally to multiple selling and marketing options. The recommendations were given to RCA to regulate the agricultural cooperatives while other recommendations were given to Maraba Coffee Cooperative on the improvement of new technology in their agricultural businesses.

**Keywords:** Electronic, Commerce, Productivity, Growth, Agro Business

  

Volume: 06, Issue: 03 May - June 2023

ISSN 2582-0176

## 1.0 INTRODUCTION

(Black, 1976), defines electronic commerce as the sharing of business information, maintaining of business relationships and conducting business transactions by means of telecommunication media. The main types of electronic commerce transactions are Business-to-Business and Business-to-Consumer transactions. There are significant differences between these two types of transactions. B2B transactions are of larger volume and value, higher risks, less buyers, and different way of making purchasing decisions comparing to B2C transactions. B2B transactions are also prevailing in agribusiness as they are conducted between enterprises representing successive levels of agri-food chain.

The potential of electronic commerce is often considered from the perspective of transaction costs economics. (Christianse, 2010), distinguishes between two different ways of conducting B2B e-commerce which are the information links, which are mutual investments of the two companies in a solution of electronic communication between them, and the electronic marketplaces, which are represented by inter-organizational information systems that allow the exchange of information between many sellers and many buyers. It is believed that electronic marketplaces are more useful for the implementation of open market transactions, and are less useful for the operation of supply chains. However, electronic marketplaces, along with their development and expansion of services are becoming increasingly useful for supply chain (Christianse, 2010). What particularly distinguishes electronic marketplaces from the information links is the ease of comparison of suppliers and buyers, ease of changing suppliers and buyers, and enabling access to price information. With the development of information technology ecommerce should rather evolve from information links towards electronic marketplaces (Malone, 2007).

Electronic marketplaces have the potential to reduce market transaction costs (e.g. costs of searching for suppliers and buyers, costs of negotiation, costs of contracting and contract enforcement), they reduce the information asymmetry between the transaction parties and contribute to efficient price discovery (Welman and Kruger, 2001).Therefore, their development may be beneficial for businesses and economies.

The importance and role of electronic commerce may be particularly evident in international markets because the Internet is a global medium and reduces the barriers of distance. However, the benefits of the electronic international trade may relate primarily to the companies from developed countries, as companies from developing countries barely overcome barriers and transaction costs associated with entering the markets, and electronic commerce only helps them to reduce search costs, which is insufficient to sell goods abroad (Pare, 2003).

Agribusiness is a sector in which the diffusion of e-commerce progresses relatively slowly. (Chappell, 2009)pointed barriers to the development of B2B electronic marketplaces in agribusiness, which are: the complexity and diversity of agricultural products, traditionally important interpersonal face-to-face contacts in conducting transactions, consolidation of enterprises that reduces the need for coordination of fragmented markets by electronic commerce. Difficulties in the development of electronic agri-food markets are described by Fritz et al. 2004. In their studies, 85 electronic agri-food markets were identified existing in Europe and USA in the year 2000. They found that after two years continued operation only

  

Volume: 06, Issue: 03 May - June 2023

ISSN 2582-0176

25 of them. The rest of the electronic marketplaces have changed their business model or were closed.

Variations in productivity growth have proven one of the most durable puzzles in macroeconomics. After growing rapidly for a quarter century, productivity came to a virtual halt in the early 1970s. There was no shortage of explanations for the productivity-growth slowdown. The explanations included rising energy prices, high and unpredictable inflation, rising tax rates, growing government, burdensome environmental and health regulation, declining research and development, deteriorating labor skills, depleted inventive possibilities, and societal laziness(Leroux, 2001).

Productivity growth in the new economy sectors has made a significant contribution to economy-wide productivity growth. In the business sector over the last three years, labor productivity growth excluding the new economy sectors was 2.24 percent per year as compared to 3.19 percent per year including the new economy. Of the 1.82 percentage point increase in labor 2William D. Nordhaus, "Alternative Methods for Measuring Productivity Growth productivity growth in the last three years relative to the earlier period, 0.65 percentage point was due to the new economy sectors. The contribution of the new economy was slightly larger for well measured output because that sector is smaller than the business economy (Wilson, 2000).

In Emilia-Romagna (Northern Italy), only about 3, 000 agricultural firms have access to the Internet (less than 3%) and only 770 (about 0, 7%) connect on a regular basis (ISTAT, 2000). Similarly to other areas in the world, the adoption of the Internet technology in the region is still limited in spite of existing public incentives (Kinsey, 2000).

### 1.1 Statement of problem

Adopting E-Commerce in agriculture basing on computer's unpopularity as a business tool among farmer and farmers' low levels of literacy, the lack of the culture of using computer for marketing purpose, online payment system complexities and lack of government serious support and investment in E-Commerce were major challenges. Furthermore, building the suitable E-Commerce portals for agricultural along with awareness about advantages of E-Commerce to farmers and consumers and ease the process of online payment system with community level initiation in this sector (Chaffey, 2010).

Marketing access to customers and the lack of knowledge about the market prices are some problems of the agricultural production cycle. Villagers and farmers, who are generally small producers, have to accept middlemen prices and as a consequence they will not gain enough benefit. Another problem of farmers is insufficient awareness of prices and market demand. The agricultural marketing system in the country is not found organized. The farmers produced small quantities of food grains, vegetables, fruits, and other commodities and sell in the village and fulfill their basic needs. At present weight, price, quality control and other the village are not systematic (Cozart, T., 2000). Agriculture marketing worksin the interest of individuals which help big farmers only and large number of small farmers are always deprived of due benefits. The advent of E-Commerce in agriculture raises many issues such as suitable E-Commerce business models for which agricultural markets, impact of E-Commerce on farms, agribusiness firms, markets, and rural communities, winners and losers in these sectors. Finally,

  

Volume: 06, Issue: 03 May - June 2023

ISSN 2582-0176

Government and leader's role to implement E-Commerce in agriculture. This study provides some background, some current facts and some interpretation of the role of E-Commerce in agriculture with analysis of current challenges in this sector.

### 1.2 Objectives of the Study

This study had both general and specific objectives.

### 1.3 General objective

The general objective of the study is to analyze the contribution of electronic commerce on the productivity growth of agro businesses in Rwanda.

### 1.4 Specific objectives

1. To find out the elements of electronic commerce used by Maraba Coffee Cooperative.
2. To find out the e-commerce strategies facilitating productivity growth of agro businesses.
3. To find out the effect of electronic commerce on productivity growth of agro business.

## 2.0 LITERATURE REVIEW

### 2.1 key concepts

Electronic: Electronics comprises the physics, engineering, technology and applications that deal with the emission, flow and control of electrons in vacuum and matter. Electronics is widely used in information processing, telecommunication, and signal processing. The ability of electronic devices to act as switches makes digital information-processing possible. Interconnection technologies such as circuit boards, electronics packaging technology, and other varied forms of communication infrastructure complete circuit functionality and transform the mixed electronic components into a regular working system, called an electronic system; examples are computers or control systems. An electronic system may be a component of another engineered system or a standalone device. As of 2018 most electronic devices use semiconductor components to perform electron control (Christianse, 2010).

**Commerce:** Commerce relates to "the exchange of goods and services, especially on a large scale". It includes legal, economic, political, social, cultural and technological systems that operate in a country or in international trade (Chappell, 2009).

**Electronic commerce:** E-commerce has been defined in several ways. E-commerce can be defined as the process of buying and selling products or services using electronic data transmission via the internet and the World Wide Web (www). Ecommerce basically gives many benefits to the seller and buyers. By enhancing the credibility of the companies, ecommerce adoption helps businesses to keep abreast of industry the trends and ensuring that they are not left behind (Woog, 2010).

**Productivity:** Productivity describes various measures of the efficiency of production. Often (yet not always), a productivity measure is expressed as the ratio of an aggregate output to a

  

Volume: 06, Issue: 03 May - June 2023

ISSN 2582-0176

single input or an aggregate input used in a production process, i.e. output per unit of input. Most common example is the (aggregate) labor productivity measure, e.g., such as GDP per worker. There are many different definitions of productivity (including those that are not defined as ratios of output to input) and the choice among them depends on the purpose of the productivity measurement and/or data availability. The key source of difference between various productivity measures is also usually related (directly or indirectly) to how the outputs and the inputs are aggregated into scalars to obtain such a ratio-type measure of productivity (Chaffey, 2010).

**Productivity growth:** Productivity is the efficiency with which firms convert inputs such as labor, capital, and materials into outputs. The detailed collection of productivity data over the past few decades has enabled economists to make substantial strides in empirically understanding how this input-output conversion occurs within firms and across time, industries, and countries (Wilson, 2000).

**Agribusiness:** the businesses collectively associated with the production, processing, and distribution of agricultural products (Vincent, 2011).

### 2.2 Review of related literature

#### 2.2.1 Conceptual framework

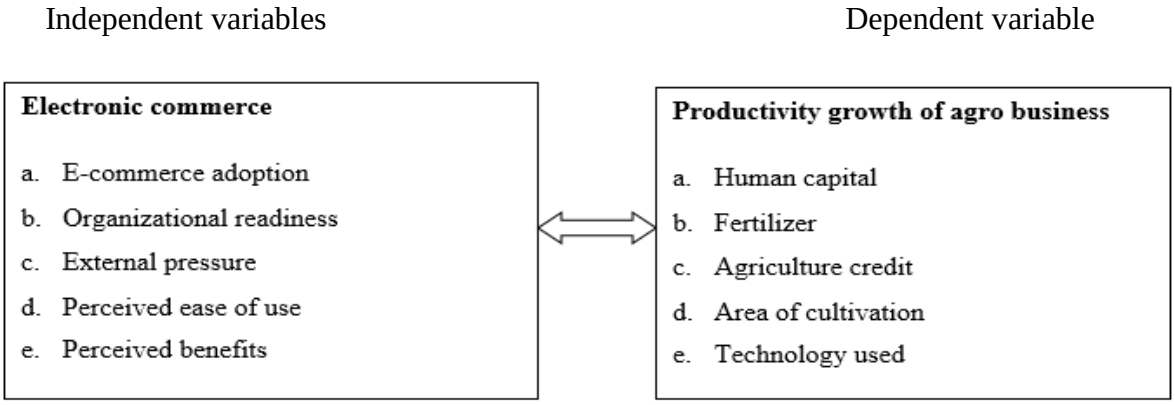


**Figure 1: Conceptual framework**

#### 2.2.2 Electronic Commerce

Electronic Commerce (EC) can be considered a major pathway for future strategies related to marketing and efficiency improvement in the agri-food chain. Nevertheless, the adoption of EC by small and medium firms in this sector in Italy is still not frequent, in particular if it is compared with the expectations of the benefits of such instrument. After the disillusion on the performances of the so called "new economy", it is even more relevant to try to understand what the realistic opportunities brought about by EC are, and how they can be exploited. In this sense, a higher understanding of the factors affecting the spread of EC in business organization is required in order to devise strategies able to allow the exploitation of existing opportunities (Brush, 2010).

  

Volume: 06, Issue: 03 May - June 2023

ISSN 2582-0176

While internet has reached a major significance in terms of economic and technological attention, a comprehensive economic framework for the interpretation of the phenomenon is not yet available. While some theories have drawn from almost philosophical concepts in order to advocate that Internet has been a real revolution subverting economic laws, economic theory has tried to provide positive models of EC which build on existing categories and experiences. The recent literature shows a more operative approach, with the development of new, ad hoc frameworks of analysis. A summary of the main theoretical approaches that can be applied to electronic networks, including EC, is provided by (Cozart, T., 2000), who list the following approaches: - economic analysis, strategic behavior, industrial marketing and organizational behavior (Christianse, 2010).

The first approach, based on economic theory, tends to deal with electronic markets through the transaction costs approach: EC could reduce transaction costs into markets and other forms of interaction among economic actors, and that should generate a reduction of production costs. In addition, an impact on the food chain organization is expected. The benefits of EC should be then more relevant for areas of the food chain dominated by market transactions instead of by contracts or other forms of networking. The moving to EC should hence be much easier and faster for simple standardized products and low-investment specificity (Wilson, 2000).

A second view is that of EC as a strategic choice. In this sense, electronic networks can be viewed as a bundle of relationships aimed at reinforcing the strategic position of the firm and, as a consequence, it's competitively in the system (Wilson, 2000).

The third point of view is that of industrial marketing. In this case, attention is focused on the existence or the possible creation of networks between economic actors. As a consequence, the problem is to understand the ability of EC to strengthen relationships and to improve forms of co-ordination along the food chain. Note that, while in the first perspective (transaction costs) EC may be viewed mainly as a force promoting markets instead of structured networks, in the marketing perspective the opposite applies. One of the key actors of the system is, of course, the final consumer. In this sense it is possible to view EC as an instrument to contact the customer and increase his fidelity (Wilson, 2000).

The fourth approach to the problems of EC regards the organizational behavior. In this sense, the adoption of EC depends on existing relationships among actors, including confidence and reputation. A high level of confidence allows the acceptability of relatively open contracts in which the terms of the exchange are not completely defined. Also, in a system with low levels of information, the bias concerning the use of different technologies may be a major motivation for choosing or rejecting them. One possible conclusion is that the diffusion of EC will push the system towards mixed forms of transaction which are different both from markets and from hierarchies. Amalgamating the different elements within the approaches illustrated, it is possible to presume that market complexity and asset specificity are the main determinants of the organization of the system. The organization and the relationships network between actors determines how entrepreneurs take strategic and proactive decisions, including the adoption of EC (Wilson, 2000).

## 3.0 RESEARCH METHODOLOGY

  

Volume: 06, Issue: 03 May - June 2023

ISSN 2582-0176

Indicates various methods and techniques was by the researcher during the course of gathering relevant information from the field. It also describes methods and techniques used i.e. Research design, target population, sample design, data collection procedures, data analysis, limitations of the study and ethical consideration.

### 3.1 Research design

According to (Kothari, 2008) a research design is "the arrangement of conditions for collection and analysis of data in a manner that aims to combine relevance to the research purpose with economy in procedure". This research used a descriptive research, where qualitative and quantitative approach was used.

### 3.2 Study population

It can be presumed that in such an inquiry when all the items are covered no element of chance is left and highest accuracy is obtained (Kothari, 2008). The population of this research was 25 employees of Maraba Coffee Cooperative. The researcher considered the employees from management, finance, accounting, planning and budgeting, production and human resource management department as they are considered to have the knowledge about private sector and youth unemployment reduction.

### 3.3 Sample design

A sample design is a definite plan for obtaining a sample from a given population. It refers to the technique or the procedure the researcher would adopt in selecting items for the sample (Kothari, 2008).This is the method or practice that the researcher usedto extract information from persons or groups to whom the research intended for to generalize researcher's findings.

### 3.4 Sample size determination

(Gay, 1996), has suggested guidelines for selecting a sample size for small population (N<100), there is little point in sampling and the researcher surveys the entire population. Therefore, the researcher considered the whole population as the sample size.

### 3.5 Sampling techniques

According to (Black, 1976), census does not involve any random selection process. Further, according to (Welman and Kruger, 2001), the advantage of non-probability sampling is that it is economical and less complicated.Universe technique was also used because the research considered the whole population as the sample size. Therefore the sample size was25 employees of Maraba Coffee Cooperative.

### 3.6 Data collection

#### 3.6.1 Sources of data collection

In conducting this research, the researcher collected the data from primary and secondary data sources.

  

Volume: 06, Issue: 03 May - June 2023

ISSN 2582-0176

### 3.6.2 Primary data source

According to (Kothari C. R., 2004), the primary sources of information consist of data collected by researchers themselves during the course of their work. The primary data come from the respondents you are researching from and therefore the most direct kinds of information you can collect. Primary data is said to be the first hand observation and investigation. This research relied considerably on primary data collected from employees of Maraba Coffee Cooperative using questionnaire.

### 3.6.3 Secondary data source

According to (Churchill, 1992) defines secondary data as information not gathered for the immediate study at hand but for other purpose. The researcher used the existing relevant information to the subject matter. Various published texts were consulted. The researcher also used progress and evaluation reports/both annual and quarterly and other unpublished documents got from Maraba Coffee Cooperative.

## 4.0 DATA ANALYSIS

This section indicates the data collected related to specific objectives one of the study. It looks for elements of electronic commerce used byMaraba Coffee Cooperative.

### 4.1 The researcher sought to know the elements of electronic commerce used by Maraba Coffee Cooperative

**Table VI.The elements of electronic commerce used by Maraba Coffee Cooperative**

| Variable categories | Frequency | Percent |
|---|---|---|
| Utilize traffic building techniques | 7 | 28.0 |
| Create a positive customer experience | 6 | 24.0 |
| Prove that your business is trustworthy | 5 | 20.0 |
| Include complete product information | 4 | 16.0 |
| Adequate on-site search engine | 3 | 12.0 |
| **Total** | **25** | **100.0** |

**Source:** Primary data, Octobert 2019

The findings from table VIshows the element of electronic commerce used by Maraba Coffee Cooperative. 28% of the respondents reported utilize traffic building techniques, 24% of the respondents reported create a positive customer experience, 20% of the respondents reported prove that your business is trustworthy, 16% of the respondents reported include complete product information and 12% of them adequate on-site search engine. The researcher assessed that all these elements have positive impact on the productivity of Maraba Coffee Cooperative.

  

Volume: 06, Issue: 03 May - June 2023

ISSN 2582-0176

### 4.2 The determinants of electronic commerce used by Maraba Coffee Cooperative

**Table VII. The determinants of electronic commerce used by Maraba Coffee Cooperative**

| Determinants of e-commerce | Frequency | Percent |
|---|---|---|
| Organizational readiness | 3 | 12 |
| External pressure | 9 | 36 |
| Perceived ease of use | 8 | 32 |
| Perceived benefits | 5 | 20 |
| **Total** | **25** | **100.0** |

**Source: Primary data, October 2019**

Table VII shows the determinants of electronic commerce used by Maraba Coffee Cooperatove. 36% of the respondents reported external pressure, 32% of the respondents reported of perceived ease of use, 20% of the respondents reported perceived benefits and lastly 12% of respondents reported organizational readiness. This implied that these determinants facilitate the productivity of Maraba Coffee Cooperative.

### 4.3 The requirements for implementation of e-commerce in your cooperative

Table VIII below indicates the requirements for implementation of electronic commerce used by Maraba Coffee Cooperative.

**Table VIII. The requirements for implementation of electronic commerce used by Maraba Coffee Cooperative**

| Requirements | Frequency | Percent |
|---|---|---|
| Computers | 7 | 28.0 |
| Networks | 6 | 24.0 |
| Information system | 3 | 12.0 |
| Users | 5 | 20.0 |
| Software | 4 | 16.0 |
| **Total** | **25** | **100.0** |

**Source:** Primary data, October 2019

Table VIIIshows the requirements for implementation of e-commerce28% of the respondents stated computers,24% of the respondents stated networks, 20% of the respondents stated users,

  

Volume: 06, Issue: 03 May - June 2023

ISSN 2582-0176

16% of them stated software and 12% of them stated software. This implies that these requirements are required during implementation of e-commerce.

### 4.4 E-commerce strategies used by Maraba Coffee Cooperative

This section indicates e-commerce strategies used by Maraba Coffee Cooperative.

Table IX below indicates the strategies ofelectronic commerce used by Maraba Coffee Cooperative.

**Table IX. E-commerce strategies used by Maraba Coffee Cooperative**

| E-commerce strategies | Frequency | Percent |
|---|---|---|
| Interactive product visualization | 8 | 32 |
| Artificial intelligence | 1 | 4 |
| Advance product filtering | 5 | 20 |
| Chatbots | 7 | 28 |
| More delivery options | 4 | 16 |
| **Total** | **25** | **100.0** |

**Source: Primary data, October2019**

Table IX shows e-commerce strategies 32% of the respondents reported interactive visualization, 28% of the respondents reportedchatbots, 20% of the respondents reportedadvance product, 16% of respondents reportedmore delivery options and 4% of them reportedartificial intelligent. The researcher assessed that these strategies improved the electronic commerce hence productivity performance.

### 4.5 The rate of e-commerce strategies achievement by Maraba Coffee Cooperative

Table X below indicates the rate of e-commerce strategies achievement by Maraba Coffee Cooperative.

**Table X. The rate of e-commerce strategies achievement by Maraba Coffee Cooperative**

| The rate of e-commerce strategies | Frequency | Percent |
|---|---|---|
| Improved | 25 | 100.0 |
| Show no change | 0 | 0.0 |
| Decreased | 0 | 0.0 |
| Worsen | 0 | 0.0 |
| **Total** | **25** | **100.0** |

  

Volume: 06, Issue: 03 May - June 2023

ISSN 2582-0176

**Source: Primary data, October 2019**

Table X shows 100% of the respondents stated that the e-commerce strategies achievement was improved in Maraba Coffee Cooperative. This implies that e-commerce strategies achievement was improved as agreed by the majority of the respondents.

### 4.6 The rate of Maraba coffee on the international market compared to the previous years

Table XI below indicates the rate of Maraba Coffee on the international market compared to previous years.

**Table XI. The rate of Maraba coffee on the international market compared to the previous years**

| Variable categories | Frequency | Percent |
|---|---|---|
| 50% | 0 | 0.0 |
| 40% | 1 | 4.0 |
| 30% | 3 | 12.0 |
| 20% | 5 | 20.0 |
| 10% | 6 | 24.0 |
| Less than 10% | 10 | 40.0 |
| No change | 0 | 0.0 |
| **Total** | **25** | **100.0** |

**Source: Primary data, October 2019**

Table XI shows the rate of Maraba Coffee on the international market. 40% of the respondents reported less than 10%, 24% of them reported 10%, 20% of the respondents reported 20%, 12% of the respondents reported 30% and 4% of the respondents reported 40%. The researcher assessed that the rate of Maraba Coffee on the internation marker is less than 10% compared to previous years.

### 4.7 The effect of electronic commerce on productivity growth of agro business

This section is related to the objective three discussing on the effect of e-commerce on the productivity growth of agro businesses.

### 4.8 Whether the productivity improved due to electronic commerce

Table XII below the researcher sought to know whether the productivity improved due to electronic commerce.

**Table XII. Whether the productivity improved due to electronic commerce**

  

Volume: 06, Issue: 03 May - June 2023

ISSN 2582-0176

| Variable Categories | Frequency | Percent |
|---|---|---|
| Improved | 25 | 100.0 |
| Show no change | 0 | 0.0 |
| Decreased | 0 | 0.0 |
| Worsen | 0 | 0.0 |
| **Total** | **25** | **100** |

**Source: Primary data, October 2019**

The findings from table XIIshows that 100% of the respondents stated that the productivity improved due to electronic commerce.The researcher assessed that the electronic commerce improved the productivity growth of Maraba Coffee Cooperative.

### 4.9 Whether the productivity improved due to electronic commerce

Table XIII below the researcher sought to know whether the productivity improved due to electronic commerce.

**Table XIII. Whether the productivity improved due to electronic commerce**

| Variable categories | Frequency | Percent |
|---|---|---|
| 50% | 0 | 0.0 |
| 40% | 0 | 0.0 |
| 30% | 0 | 0.0 |
| 20% | 2 | 8 |
| 10% | 15 | 60.0 |
| Less than 10% | 8 | 32.0 |
| No change | 0 | 0 |
| **Total** | **25** | **100** |

**Source: Primary data, October 2019**

Table XIII shows the rate of improvement of productivity growth due to electronic commerce. 60% of the respondents stated the rate of 10%. 32% of the respondents stated the rate of less than 10% while 8% of them reported 8%. The researcher assessed that the rate of productivity was improved at the rate of 10% as agreed by the majority of the respondents.

### 4.10 Indicators of productivity growth of Maraba Coffee Cooperative

From table XIV below the researcher sought to know the indicators of productivity growth of Maraba Coffee Cooperative.

  

Volume: 06, Issue: 03 May - June 2023

ISSN 2582-0176

**Table XIV. Indicators of productivity growth of Maraba Coffee Cooperative**

| Indicators of productivity | Frequency | Percent |
|---|---|---|
| Human capital | 9 | 36.0 |
| Agriculture credit | 5 | 20.0 |
| Area of cultivation | 4 | 16.0 |
| Technology used | 4 | 16.0 |
| Fertilizer | 3 | 12.0 |
| **Total** | **25** | **100.0** |

**Source: Primary data, October 2019**

Table XIV shows that 36% of the respondents stated human capital,20% of them stated agriculture credit, 16% of them stated area of cultivation and technology used and 12% of them stated fertilizer. This implies that these indicators shows the productivity growth of Maraba Coffee Cooperative.

### 4.11 The importance of e=commerce on productivity growth

From table XV below shows the importance of electronic commerce on productivity growth of Maraba Coffee Cooperative.

**Table XV. The importance of electronic commerce on productivity of Maraba Coffee Cooperative**

| Variable Categories | Frequency | Percent |
|---|---|---|
| Wide variety of products | 7 | 28.0 |
| Lower Cost than traditional shopping and selling | 4 | 16.0 |
| Less time consuming and faster consumer consumption | 3 | 12.0 |
| Exciting offers and shopping deals notifications | 2 | 8.0 |
| Transparent business system | 1 | 4.0 |
| Enhancement in digital products and services production | 7 | 28.0 |
| Multiple selling and marketing options | 1 | 4.0 |
| More Customer retention than traditional shopping | 0 | 0.0 |
| **Total** | **25** | **100.0** |

**Source:** Primary data, October 2019

  

Volume: 06, Issue: 03 May - June 2023

ISSN 2582-0176

The findings from table XV shows that 28% of the respondents statedwide variety of products equally to enhancement in digital products and services production, 16% of them statedlower costthan traditional shopping and selling, 12% of them stated less time consuming and faster consumer consumption area,4% of them stated transparent business system equally to multiple selling and marketing options.

## 5.0 CONCLUSION

The researcher embarked on a research of finding from electronic commerce and productivity growth agro business in Rwanda. The element of electronic commerce used by Maraba Coffee Cooperative were to utilize traffic building techniques, creation of a positive customer experience, prove that a business is trustworthy, complete product information and adequate on-site search engine. E-commerce strategies reported were interactive visualization,chatbots, more delivery options and artificial intelligent. The importance of electronic commerce on productivity were wide variety of products equally to enhancement in digital products and services production, lower cost than traditional shopping and selling, less time consuming and faster consumer consumption area and business system equally to multiple selling and marketing options.

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