

# Ecommerce & Sustainable Development: A Look into the United Nations Sustainable Development Goal 9

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**Abstract:-** The paper describes the scope of Ecommerce adoption in Southern African countries. This study contributes to the ongoing studies of identifying opportunities that assist in achieving the Sustainable Development Goals Nine (9) by the year 2030. The research focusses mainly on Ecommerce adoption and its role in achieving the Sustainability Development Goal (9) which is to build resilient infrastructure, promote sustainability industrialization, and foster innovation in Sub-Saharan African countries. This research includes the literature pertaining to the United Nation`s Sustainable Development Goals Nine (9), Ecommerce as an innovation and its role in economic growth. Ecommerce is the purchasing, selling, and providing of goods or services using the internet which entail computer networks. Ecommerce is one of the innovations that enables businesses to provide products or services using online platforms both locally and globally.

The objective of the study is to establish the main barriers of Ecommerce adoption in Southern African countries and to determine if Ecommerce contributes to the growth and sustainability of the economies of Southern African countries. The paper employs the use of quantitative methods such as an online survey to collect data from participants who reside within the Sub-Saharan countries in Africa. The quantitative data collected was analyzed using descriptive statistics such as tables, graphs, and tables. The significance of the study is to highlight key challenges of Ecommerce adoption and to determine what needs to be done to improve Ecommerce adoption for sustainability and economic growth.

**Keywords:-** Ecommerce, Economic Growth, Sustainable Development Goals (9), Cost, Infrastructure, Security, Ease of Use, Usability.

## I. INTRODUCTION

Today communities and organizations are shifting from traditional ways of buying and selling and are now using online technological applications. "There has been a rapid improvement of information and communication technologies (ITC`s) over the years and their full adoption is key to the survival of companies irrespective of the size of the company" (Hock-Eam and Lip-Sam,2011). Information Communication Technologies (ICT) are improving various businesses in different industries. Businesses of various sizes whether it be small to medium companies or large corporations are now

investing on conducting their operations online. There is an emergence and adoption of Ecommerce applications that are used by companies to conduct their business operations online.

However, there are challenges that organizations face when they need to adopt Ecommerce applications into their business operations and processes. Consumers and Individual households also experience challenges in adopting Ecommerce. This lagging behind of most developing countries could be the lack of infrastructure, access to the internet or policies that are available to ensure that there is sustainability and growth of their economies.

In this age of globalization and Information Communication Technologies (ICT), online applications platforms have enabled businesses and people to buy or sell online. Ecommerce is one of the innovations that is a key contributor to achieving Sustainable Development Goal Nine (9) of the United Nations.

## II. LITERATURE REVIEW

### A. Conceptual Background

The two major concepts investigated in this paper are (1) Ecommerce & Sustainable Development Goal Nine (9) and (2) Economic Growth & Ecommerce adoption in Southern African Countries.

### ➤ Ecommerce & Sustainable Development Goal 9

According to the United Nations (2017), Sustainable development Goal Nine (9) `s key role is to introduce and promote new technologies, enabling international trade whilst using efficient resources to achieve that SDG 9. The United Nations (2017) also indicated that in terms of communications infrastructure more than half of the world`s population is using online platforms and their areas are covered with mobile network. Ndonga (2012) mentioned that internet users globally have been growing rapidly over the last years with recent statistics indicating that one third of the world`s population is now online. Business transactions are now being conducted using online platforms which has supports developing countries to trade nationally and internationally. The adoption of Information Communication Technologies has brought a new way of conducting business online. This has increased the rapid adoption of Ecommerce which entails the usage of online applications and technologies to conduct business online. Ecommerce is one of the innovations that improves trade both

nationally and international and does constitute to achieving Sustainable Development Goal Nine (9).

Ecommerce can be defined as “the exchange of business communications and transactions over internet technologies” Ndonga (2012). Ecommerce may involve various forms of processes which may include for example: Business-to-Consumer(B2C), Business-to-Business(B2) transactions and other business processes.

The United Nations (2021) made a statement and mentioned that “even before the Covid-19 pandemic, there has been a decrease in the growth of the global manufacturing sector”. The increase in the evolution of information technologies has introduced what is now called the digital economy. This economy is characterized by the usage of online applications, information, services, systems, e-businesses.

Bukht and Heeks (2017) mentioned that the digital economy can be defined as the use of various digital technologies for performing activities, such as e-business, Ecommerce, automation, and artificial intelligence. Companies are now focusing on providing their services and product on digital platforms that are available online. There is a need to provide information and services rather than products that are manufactured through hard labor. Households, individuals, and communities have opted for connecting and communicating using mobile devices and online platforms.

In the year 2015, the United Nations provided a blueprint for peace and prosperity for the people all over the world for the future. United Nations (2017) highlighted that Sustainable Development Goal nine (9) enables an inclusive sustainable industrialization in addition to innovation and infrastructure can enable competitive forces that can generate employment and income.

#### *B. Economic Growth & Ecommerce adoption in Southern African Countries*

##### ➤ *Barriers is Ecommerce adoption in Southern African Countries.*

Alinsato, Agadjihouede and Igue (2016) mentioned that Ecommerce has “increased due to the rise in mobile telephony and the rapid growth in the use of internet purchases or online payments. Ducass and Kwadjane (2015) further stated that during the year 2014 – 2017, Africa grew by 240.44 per cent compared to 97.55 per cent in Asia, 42.20 per cent in Europe and 69.17 per cent in America. However, Africa’s share of global Ecommerce transaction remained less than 2 percent in 2017. This has really impacted the growth of Africa’s economy and its development. According to the World Bank (2016), access to the internet has dramatically expanded the information base, it has facilitated the searching and sharing for information for people and organizations. However, there exists a digital divide in the Sub-Saharan African countries that prevents further development towards reaching Sustainable Development Goal Nine (9).

According to Alpher & Miktus (2019), the challenges that Southern African countries encounter may be summarized as follows:

- There is a great majority of Sub-Saharan African countries that are lagging in digital connectivity except for Botswana, Lesotho, South Africa, Mauritius, Seychelles, Ghana, and Rwanda.
- Sub-Saharan countries on average perform well in terms of affordability and quality but they perform less on in terms of infrastructure, internet usage as well as having the knowledge to use the application or technology.
- There needs to be a better regulatory control to offer security and privacy for people accessing the internet and its applications. The corporate sector needs to provide an enabling environment for Ecommerce to be adopted and successful. Access to the internet which provide access to online connectivity is also essential.

Ndonga (2012) noted that if Africa should overcome its own challenges pertaining to Ecommerce adoption, then the following can be achieved:

- Ecommerce can increase the trading within countries thus growing the GDP (Gross National Product) through export growth and employment creation. There are a lot of communities within developing countries that may expand their businesses nationally and internationally. This will increase commodity export and the country’s foreign exchange earnings which can be used to finance importation of goods.
- There is an opportunity for the expansion of employment as more people can develop IT related skills and conduct businesses online. This offers opportunities for people to seek employment internationally whilst working from home or country of origin.
- New avenues for online employment for women can be introduced thus reducing gender inequality.
- The increase of online employment will increase the number of skilled people who can work using online applications. Educational institutions can increase the increase the number of online courses available for to anyone using e-learning or online correspondence.

### **III. RESEARCH METHODOLOGY**

In this study, a quantitative study was conducted by using an online survey to gather data concerning Ecommerce adoption in Southern African countries. Trochim (2006) made suggestion that quantitative research is always confirmed as deductive. The approach allows the researcher to conduct investigation from generalization to going into more detail. The researcher investigates if the hypothesis exists or not and whether the research conducted can prove or disapprove the theory. The nature of the relationship between Ecommerce and Sustainable development Goal Nine (9) in Southern African countries has not been fully explored. The study aims to understand the factors that lead to Ecommerce adoption and economic sustainable development Nine (9) is Southern African countries. In addition to this, challenges faced by Southern African countries will be identified so that recommendations can be made to improve the status quo.

#### IV. DATA COLLECTION

The researcher intends to collect data from a sample size of 500 participants from any of the Sub-Saharan African Countries such as: South Africa, Zimbabwe, Nigeria, Tanzania, Congo, Namibia, Kenya, Angola, and Zambia. The sample size of 500 participants is to ensure that enough data can be collected to represent the chosen populations from the different countries. An online survey will be used to collect the data from all willing participants.

##### A. Data Analysis

The gathered data was analyzed by using Statistical Software Suite (SAS) and Microsoft Excel to derive relative percentages will be used to illustrate the research findings. The use of frequency tables, non-parametric tests such as Chi-Square were used to present the research findings. Due to the COVID-19 pandemic, the researcher was limited to using self-administered questionnaires that will be provided online for distribution to willing participants.

To analyses the data, the researcher adopted nonparametric procedures to derive results for each sub-question. Allen & Seaman (2007) mentioned that nonparametric procedures are based on rank, median or range and they are distribution free methods such as frequencies, contingency tables, tabulations as well as Chi-squared statistics. The researcher adopted the statistical methods such as frequency tables, tabulations, bar/pie charts as well Chi-Square statistics to analyze the data collected.

##### B. Data Collection and Reliability

An online survey was adopted to collect responses from respondents which means there was no face-to face interaction and no bias or influence from the researcher. The researcher’s questions were standard and unchanged which means each respondent received the same set of questions. To assess the data, a reliability test known as “Cronbach alpha” was used to test the reliability of the data collected from the respondents.

Table 4.2.1 Cronbach Alpha  $\alpha$  results for variables: Ecommerce adoption, Cost, Security, Ease of Use and Usefulness.

The CORR Procedure							
5 Variables: CostEcommerce EaseOfUseEcommerce EcommerceUsefull SecurityEcommerce EcommerceImprovesEconomic							
Simple Statistics							
Variable	N	Mean	Std Dev	Sum	Minimum	Maximum	Label
CostEcommerce	499	3.13226	1.31966	1563	1.00000	5.00000	CostEcommerce
EaseOfUseEcommerce	497	4.33803	0.69736	2156	2.00000	5.00000	EaseOfUseEcommerce
EcommerceUsefull	496	4.31855	0.80110	2142	1.00000	5.00000	EcommerceUsefull
SecurityEcommerce	498	4.26506	0.86885	2124	1.00000	5.00000	SecurityEcommerce
EcommerceImprovesEconomic	497	4.51107	0.68420	2242	1.00000	5.00000	EcommerceImprovesEconomic

Cronbach Coefficient Alpha	
Variables	Alpha
Raw	0.675499
Standardized	0.727235

An accepted rule is that Coefficient Alpha  $\alpha$  which is between 0.6-0.7 indicates an acceptable level of reliability. The above results indicate that Coefficient Alpha  $\alpha$  is equal to 0.727

which indicates that the test is reliable and consistent for the above stated variables.

#### V. RESULTS

##### A. Problem Statement

It is imperative that companies and communities around the world must have access to the internet and Ecommerce applications. Access to information and technological resources is important to contributing to the digital economy. Scientific studies and research need to be conducted to identify the challenges and areas of improvement for areas where access to the information is needed. Ecommerce plays a big role in the access of information and technology worldwide. It is important to understand the barriers of Ecommerce adoption in Southern African countries to formulate strategies to counteract against the issues identified.

##### ➤ Main Research Problem:

What effect does Ecommerce have on the sustainability and economic growth of Southern African countries?

##### ➤ Demographic Analysis

An online survey was distributed to 500 respondents and all respondents participated in this study. The findings are discussed in relation to each sub-question.

**Sub-Question 1:** What are the demographic profiles of adopters and non-adopters of Ecommerce in the Southern African Countries?

##### B. Gender and Age

Chart 5.1: Population Pyramid indicating Gender and Age

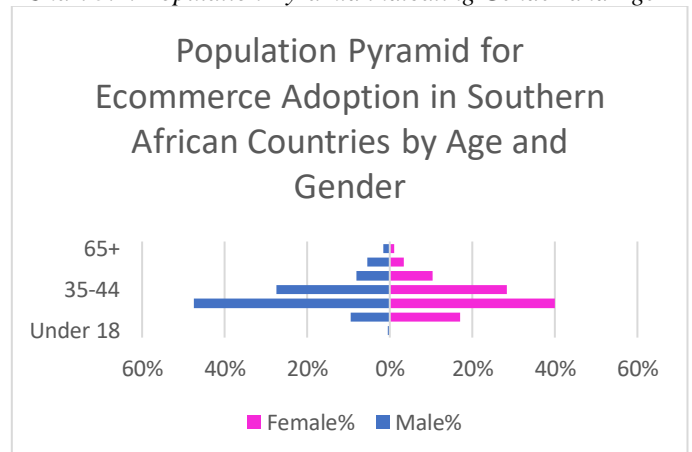


Chart 5.1 illustrates the sample population for the Ecommerce Adoption in Southern African countries. The sample size consists of five hundred (500) respondents. The chart illustrates a higher percentage of respondents who are aged between twenty-five (25) and thirty-four years old who are use Ecommerce.

C. Employment and Industry

Table 5.1: Respondents who are employed

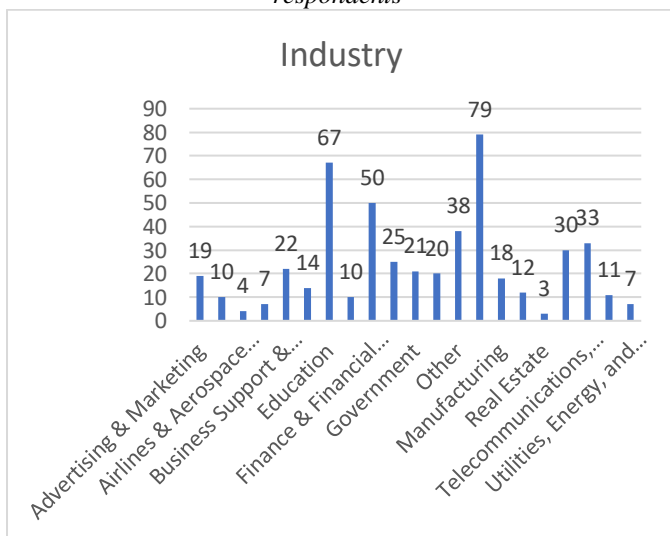
Demographic profile of employed respondents in Southern African Countries

The FREQ Procedure

Employment				
Employment	Frequency	Percent	Cumulative Frequency	Cumulative Percent
No	59	11.82	59	11.82
Yes	440	88.18	499	100.00

Table 5.1 show the result of the demographic profile of the respondents in terms of employment. The frequency table indicates that from the sample of population indicate that eleven (11%) of respondents are unemployed and Eighty-Eight (88%) of the respondents are employed.

Chart 5.2 Bar Chart that illustrates the industry of the respondents



Bar chart 5.2 illustrate the various industries that the respondents belong in. The highest number of respondents are from the insurance and education industry which both add up hundred and forty-nine (149) respondents.

Table 5.2: Working conditions

Internet and Working Conditions from employed respondents

The FREQ Procedure

Frequency Percent Row Pct Col Pct	Table of HomeBasedOfficeBased by InternetAccess			
	HomeBasedOfficeBased(HomeBasedOfficeBased)	InternetAccess(InternetAccess)		
		No	Yes	Total
	Both	0	123	123
		0.00	24.95	24.95
		0.00	100.00	
		0.00	25.10	
	Office Based Location	1	147	148
		0.20	29.82	30.02
		0.68	99.32	
		33.33	30.00	
	Working Remotely from Home	2	220	222
		0.41	44.62	45.03
		0.90	99.10	
		66.67	44.90	
	Total	3	490	493
		0.61	99.39	100.00

Frequency Missing = 6

Table 5.2 shows the result of the demographic profile of the respondents in terms of employment and their working preference. The frequency table indicates that one hundred and forty-seven (147) respondents are office based, two hundred and twenty (220) respondents are working remotely from home and one hundred and twenty-three (123) respondents are working hybrid.

D. Ecommerce adoption determinants in Southern African countries.

Sub-Question 2: Do Perceived usefulness (PU), Perceived ease of use (PEOU), Perceived risks (PR), Perceived cost (PCo) influence consumers' behavioral intention to adopt Ecommerce in Southern African Countries?

According to McHugh (2013), Chi -Square test is used for the following reasons:

- It is a non-parametric statistic which is also called the distribution free test.
- It can provide significance on observed differences as well as detailed information on categories and their differences.
- It is used to measure categorical or nominal data.

Chi-Square statistical test was adopted to derive a P(Probability) value of the data. The Chi-Squared formula is as follows:

$$\chi^2 = \sum \frac{(O_i - E_i)^2}{E_i}$$

Where:

O = Observed value

E = Expected value

$\chi^2$  = The Chi-square value

The researcher used frequency tables to derive percentages and Chi-Square test results to derive the P- value. The researcher was guided by the following table to derive the results for the following variables which are Ecommerce adoption, Cost, Security, Ease of Use and Usefulness.

Table 5.2: Hypothesis Testing Guideline

P value < 0.05 Reject H0	There is a positive relationship between the variables OR there is a significant association between the identified variables.
P value > 0.05 Accept H0	There is no significant relationship between the variables OR there is no significant association between the identified variables.

Table 5.3: Guideline for Statistical Results for 5 Point Likert Scale.

5 Point Likert Scale		Mean (Average)
1	Strongly Disagree	1 to 1:80
2	Disagree	1:81 to 2:60
3	Neutral	2:61 to 3:40
4	Agree	3:41 to 4:20
5	Strongly Agree	4:21 to 5:00

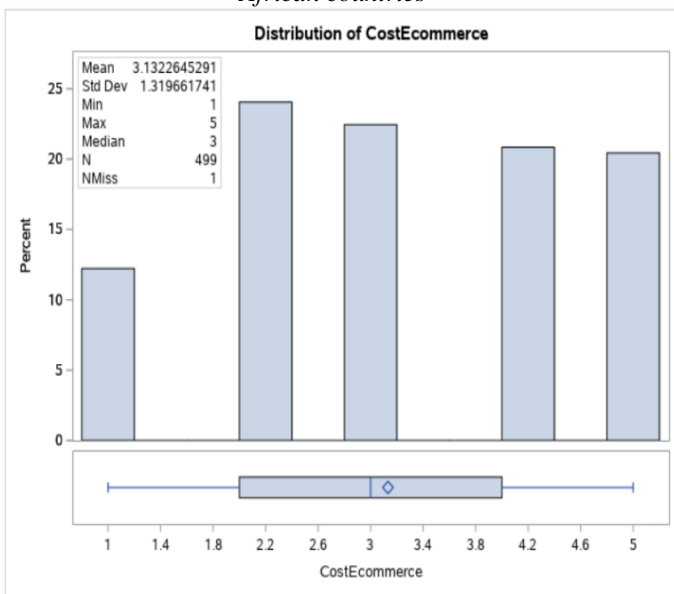
Table 5.4 Cost of Ecommerce applications contributes to the Economic Growth and Sustainability in Southern African countries.

CostEcommerce				
CostEcommerce	Frequency	Percent	Cumulative Frequency	Cumulative Percent
1	61	12.22	61	12.22
2	120	24.05	181	36.27
3	112	22.44	293	58.72
4	104	20.84	397	79.56
5	102	20.44	499	100.00
Frequency Missing = 1				

Chi-Square Test for Equal Proportions	
Chi-Square	20.8898
DF	4
Pr > ChiSq	0.0003

Sample Size = 499  
Frequency Missing = 1

Chart 5.3: Cost impacts Ecommerce adoption in Southern African countries



The above frequency table illustrates the level of agreement to the statement “Cost impacts Ecommerce adoption in Southern African countries” with typical five (5) points: (1) Strongly disagree; (2) Disagree; (3) Neither agree nor disagree; (4) Agree; (5) Strongly agree. Chi-Square results indicate that P value is less than 0.5 which means that there is a significant relationship between Cost and Ecommerce growth however the statistical results indicate the mean average as 3.13 which provides an indication that the overall response of the respondents’ answered “Neutral” about the relationship between Ecommerce and Cost in Southern African countries.

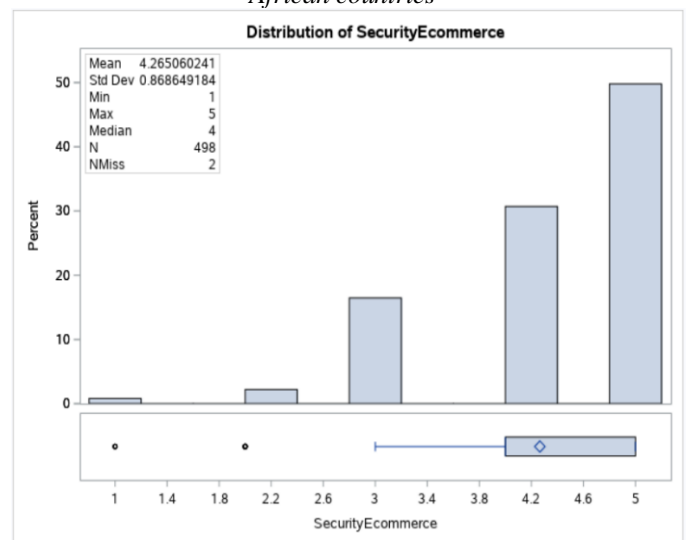
Table 5.5: Security of Ecommerce applications contributes to the Economic Growth and Sustainability in Southern African countries.

SecurityEcommerce				
SecurityEcommerce	Frequency	Percent	Cumulative Frequency	Cumulative Percent
1	4	0.80	4	0.80
2	11	2.21	15	3.01
3	82	16.47	97	19.48
4	153	30.72	250	50.20
5	248	49.80	498	100.00
Frequency Missing = 2				

Chi-Square Test for Equal Proportions	
Chi-Square	423.4257
DF	4
Pr > ChiSq	<.0001

Sample Size = 498  
Frequency Missing = 2

Chart 5.4: Security impacts Ecommerce adoption in Southern African countries



The above frequency table illustrates the level of agreement to the statement “Security impacts Ecommerce adoption in Southern African countries” with typical five (5) points: (1) Strongly disagree; (2) Disagree; (3) Neither agree nor disagree; (4) Agree; (5) Strongly agree. Chi-Square results indicate that P value is less than 0.5 which means that there is a significant relationship between Security and Ecommerce growth. The statistical results indicate the mean average as 4.26 which provides an indication that the overall response of the respondents’ answered “Agree” about the relationship between Ecommerce and Security in Southern African countries.

*Table 5.6: Ease of Use (User Friendliness) of Ecommerce applications contributes to Economic Growth and Sustainability in Southern African countries.*

EaseOfUseEcommerce				
EaseOfUseEcommerce	Frequency	Percent	Cumulative Frequency	Cumulative Percent
2	3	0.60	3	0.60
3	56	11.27	59	11.87
4	208	41.85	267	53.72
5	230	46.28	497	100.00
Frequency Missing = 3				

Chi-Square Test for Equal Proportions	
Chi-Square	302.2676
DF	3
Pr > ChiSq	<.0001

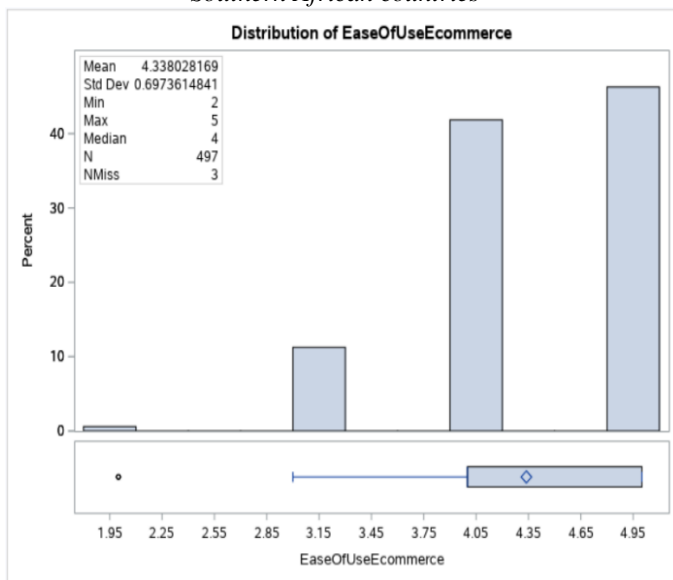
Sample Size = 497  
Frequency Missing = 3

*Table 5.7 Usefulness of Ecommerce applications contributes to Economic Growth and Sustainability in Southern African countries.*

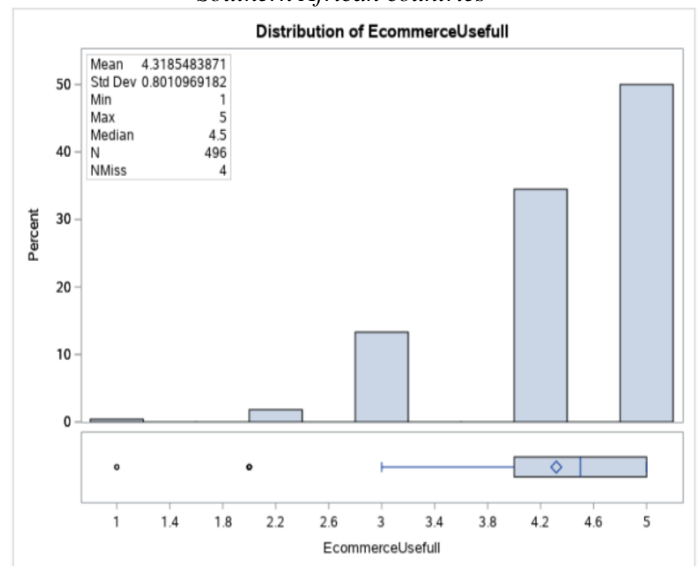
EcommerceUsefull				
EcommerceUsefull	Frequency	Percent	Cumulative Frequency	Cumulative Percent
1	2	0.40	2	0.40
2	9	1.81	11	2.22
3	66	13.31	77	15.52
4	171	34.48	248	50.00
5	248	50.00	496	100.00
Frequency Missing = 4				

Chi-Square Test for Equal Proportions	
Chi-Square	463.5363
DF	4
Pr > ChiSq	<.0001

*Chart 5.5: Ease of Use impacts Ecommerce adoption in Southern African countries*



*Chart 5.6: Usefulness impacts Ecommerce adoption in Southern African countries*



The above frequency table illustrates the level of agreement to the statement “Ease of Use impacts Ecommerce adoption in Southern African countries” with typical five (5) points: (1) Strongly disagree; (2) Disagree; (3) Neither agree nor disagree; (4) Agree; (5) Strongly agree. Chi-Square results indicate that P value is less than 0.5 which means that there is a significant relationship between Ease of Use and Ecommerce growth. The statistical results indicate the mean average as 4.33 which provides an indication that the overall response of the respondents’ answered “Strongly Agree” about the relationship between Ecommerce and Ease of Use in Southern African countries.

The above frequency table illustrates the level of agreement to the statement “Usefulness impacts Ecommerce adoption in Southern African countries” with typical five (5) points: (1) Strongly disagree; (2) Disagree; (3) Neither agree nor disagree; (4) Agree; (5) Strongly agree. Chi-Square results indicate that P value is less than 0.5 which means that there is a significant relationship between Useful and Ecommerce growth. The statistical results indicate the mean average as 4.31 which provides an indication that the overall response of the respondents’ answered “Strongly Agree” about the relationship between Ecommerce and Useful in Southern African countries.

**Sub-Question 5:** Does Ecommerce contribute to economic growth and sustainability in Southern African Countries?

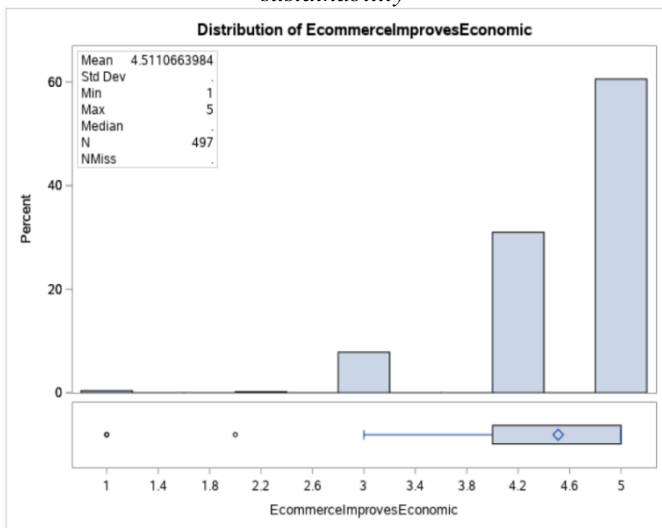
Table 5.8: Ecommerce improves Economic growth and sustainability in Southern African countries.

EcommerceImprovesEconomic					
EcommerceImprovesEconomic	Frequency	Percent	Cumulative Frequency	Cumulative Percent	
1	2	0.40	2	0.40	
2	1	0.20	3	0.60	
3	39	7.85	42	8.45	
4	154	30.99	196	39.44	
5	301	60.56	497	100.00	
Frequency Missing = 3					

Chi-Square Test for Equal Proportions	
Chi-Square	668.4225
DF	4
Pr > ChiSq	<.0001

Sample Size = 497  
Frequency Missing = 3

Chart 5.7: Ecommerce improves Economic growth and sustainability

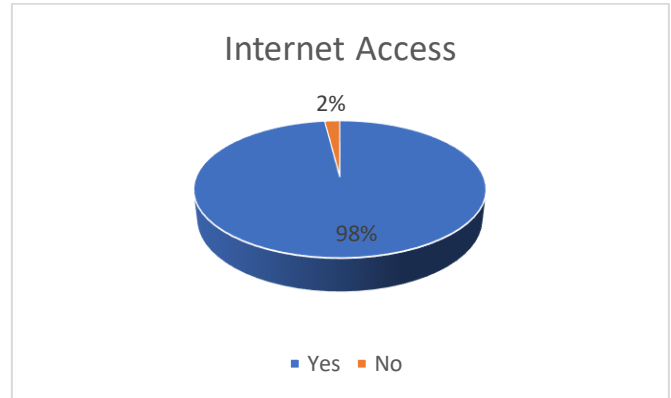


The above frequency table illustrates the level of agreement to the statement “Ecommerce improves Economic growth and Sustainability in Southern African countries” with typical five (5) points: (1) Strongly disagree; (2) Disagree; (3) Neither agree nor disagree; (4) Agree; (5) Strongly agree. Chi-Square results indicate that P value is less than 0.5 which means that there is a significant relationship between Economic Growth and Ecommerce growth. The statistical results indicate the mean average as 4.31 which provides an indication that the overall response of the respondents’ answered “Strongly Agree” about the relationship between Ecommerce and Economic Growth in Southern African countries.

E. Ecommerce adoption reasons in Southern African Countries

**Sub-Question 3:** What is the relative importance of factors that influence Individuals’ behavioral intention to adopt Ecommerce in Southern African Countries?

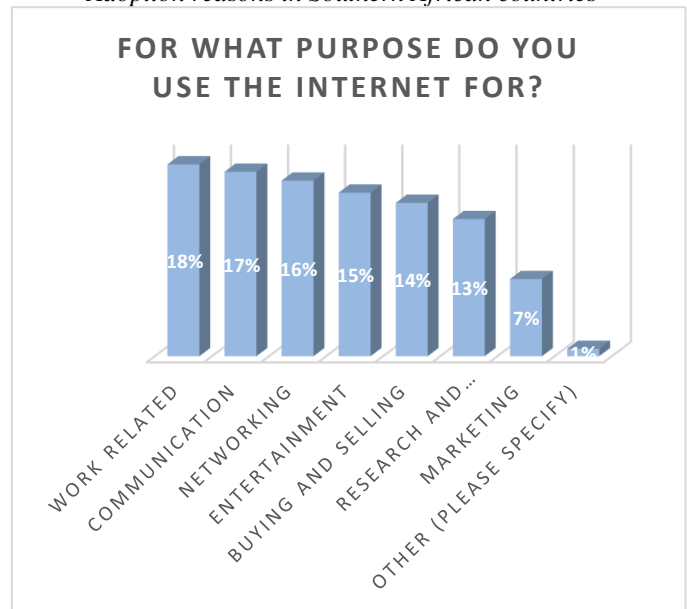
Chart 5.8: Internet Access



Pie Chart 5.8 illustrates that ninety-eight (98%) of the respondents have access to the internet and only two (2%) percent does not have access to the internet.

The respondents were asked to indicate the reasons why they used the internet. The options provided included: Work related, Communication, Networking, Entertainment, Buying and Selling, Research and information seeking and Marketing. The respondents had the opportunity of selecting one or more options.

Chart 5.9: Bar Chart that illustrates the Ecommerce Adoption reasons in Southern African countries



F. The challenges of Ecommerce adoption in Southern African Countries

**Sub-Question 4:** What are the challenges of Ecommerce adoption in Southern African countries?

The respondents were asked open-ended questions to further elaborate on what they perceived were challenges for Ecommerce Adoption in Southern African countries.

Chart 5.10: Challenges Identified in Ecommerce Adoption

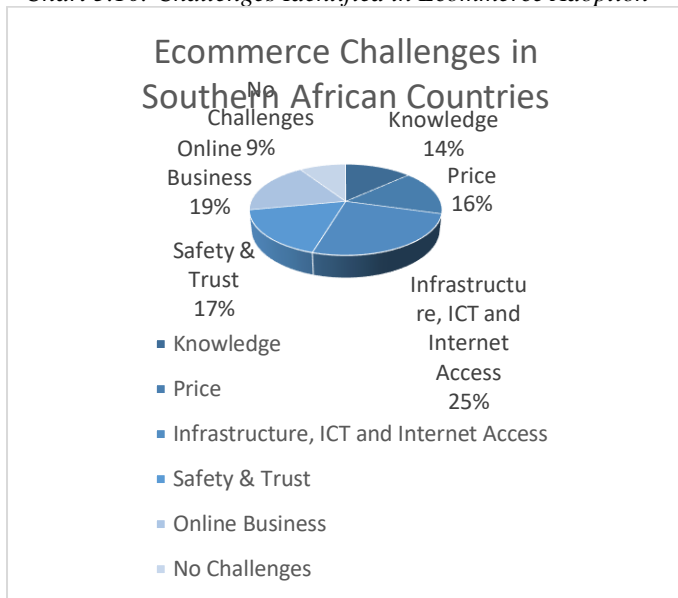


Chart 5.10 shows that twenty-five (25%) of the challenges are related to Infrastructure, Information Communication Technologies, and Internet Access. Nineteen (19%) of the participants indicated that there are challenges in relation to conducting business on online platforms. Seventeen (17%) of the respondents highlighted that there was trust and safety reasons that impacted Ecommerce adoption. Sixteen (16%) of the respondents highlighted the cost implications of adopting Ecommerce. Fourteen (14%) of the respondents indicated that there is a lack of knowledge in using Ecommerce application. Only nine (9%) mentioned that other reasons or no they experienced no challenges at all.

**VI. DISCUSSION AND IMPLICATIONS**

The study was initiated with an objective to determine the role of Ecommerce in achieving economic growth and sustainable development in Southern African countries. The countries identified for this study were randomly picked from Southern part of Africa. The goal of the research was to determine if there is a positive relationship between (1) Cost (2) Security (3) Ease of Use (4) Usefulness and (5) Ecommerce. A total of 500 responses were reviewed via an anonymous online survey which entailed a 5-point Likert Scale with open and closed questions. The same data was analyzed using Chi-square tests with frequency tables and Statistical tests were done to understand the mean average of the data.

The Chi-square test and the statistical mean analysis proved the following:

Table 6.1: Hypothesis Summary

No	Variable	Hypothesis	P-Value	Test Results
1	Ease of use	Ease of use is a significant predictor of Ecommerce adoption in	Less than < 0.05	Validated

		Southern African countries.		
2	Usefulness	Usefulness is a significant predictor of Ecommerce adoption in Southern African countries.	Less than < 0.05	Validated
3	Security	Security is a significant predictor of Ecommerce adoption in Southern African countries.	Less than < 0.05	Validated
4	Cost	Cost is a significant predictor of Ecommerce adoption in Southern African countries.	Less than < 0.05	Validated
5	Ecommerce Adoption Improves economic growth in Southern African Countries	Ecommerce adoption is a significant predictor to economic growth and sustainability in Southern African Countries.	Less than < 0.05	Validated

The above table highlights those independent variables such as Security, Cost, Ease of Use as well as Usefulness as key driving factors that enable Ecommerce to be adoption in Southern African countries. There is a positive relationship between Ecommerce and the growth of economy of Southern African countries. The results also entail that Southern African countries need to focus on ensuring that Ecommerce applications are secure for business and communities to use. The cost of using Ecommerce should be affordable and the applications should be easy to use. Ecommerce has been found to have significant relationship with the economies of Southern African countries. This means that Ecommerce and an innovation is a key to contributing towards Sustainable Development Goal Nine (9).

**VII. LIMITATIONS OF THE RESEARCH**

The researcher distributed the survey online anonymously using Survey Monkey platform. There was no formal interaction between the researcher and he participants who participated on the survey. The problem with online survey is that the researcher is not sure if the same person has done the survey again, there could be duplication of responses. There were no interviews or observations that were done for the research which means the data collected was quantitative and the researcher didn't have an opportunity to ask open ended questions or observe body behavior through facial expression.



### VIII. FURTHER RESEARCH

The existing literature has provided references that ease of use, cost, education, security, and ease of use is one of the key factors to Ecommerce adoption. However, since the Covid-19 pandemic that happened in the year 2020, there hasn't been enough research outlining the challenges faced by small businesses who are adopting Ecommerce in Southern African countries. There is a need to address security and Ecommerce regulation in terms of law so that customers feel safe when conducting business online. Cybercrime continues to be a threat for many small businesses. It is recommended that for future work, a mixture of data collection methods such as interviews and surveys should be conducted.

### IX. CONCLUSION

The Sustainable Development Goal 9 was established by the United Nations to build resilient infrastructure, promote sustainability industrialization, and foster innovation. According to the United Nations (2021: Online), research findings conducted during the year 2018 stated that 16% of the world's population does not have access to mobile broadband networks. This means not all people may have access to information and services online through the access of mobile devices. Income and employment can be generated if people have access to information communication technologies. United Nations noted that developing countries found in Southern Africa need to develop their manufacturing sector, scale up scientific research and innovation. Research findings have identified that Ecommerce is one of the key contributors to the economic growth of Southern African countries. For Ecommerce to be sustainable, factors such as Cost, Security, Ease of Use, and the usability need to be considered.

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