TALLINN UNIVERSITY OF TECHNOLOGY
School of Information Technologies

Francisca Chinonye Nwakile 214135IVGM

ASSESSING CITIZEN PERCEPTIONS OF BUSINESS REGISTRATION PROCESSES: THE CASE OF NIGERIA'S COOPERATE AFFAIRS COMMISSION.

Master's thesis

Supervisor: Eric B. Jackson
PhD Candidate

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Infotehnoloogia teaduskond

Francisca Chinonye Nwakile 214135IVGM

ETTEVÕTTE REGISTREERIMISPROTSESSIDE KOHTA KODANIKE ARUSAAMISE HINDAMINE: NIGEERIA KOOSTÖÖKOMISJONI JUHTUM.

Magistritöö

Juhendaja: Eric B. Jackson
PhD Candidate

Tallinn 2023

Author’s declaration of originality

I hereby certify that I am the sole author of this thesis. All the used materials, references to the literature, and the work of others have been referred to. This thesis has not been presented for examination anywhere else.

Author: Francisca Chinonye Nwakile

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Abstract

Developing nations, like Nigeria, are concentrating their efforts on pursuing e-government and digitizing service delivery at the moment. While this is positive, it is crucial to remember that the creation of effective e-government programs begins with the citizens and their satisfaction with e-services. Providing citizens with government services through a digital network, such as web portals, increases efficiency and transparency in the public sector; however, if e-service delivery technologies and service processes are cumbersome or unclear, this can affect citizens' perception and satisfaction with government services. This thesis aims to investigate and provide a better understanding of citizens' perception of the business registration service offered by Nigeria's Corporate Affairs Commission (CAC) through the portal. The study has focused on the usability of the portal, the registration process, and general citizen satisfaction with the service delivered by the Commission through the portal. The commission's portal and business registration process were discussed. Past research and theories on citizen experience, technology acceptance, user satisfaction, service quality, process, and usability of e-government service portals were also in view. An online questionnaire was used to get responses from citizens. 78 responses were analyzed based on demographic characteristics and other variables using excel while appropriate techniques were used to test validity and determine relationships between variables. The result was able to expose the citizen's perception and challenges affecting their satisfaction with the business registration service provided by the CAC through the service portal. Areas of improvement and areas of possible research were recommended.

Keywords: Citizen Satisfaction, Process challenges, Usability, User satisfaction, User experience, Electronic Business Registration, Nigeria, CAC, Service Portal.

This thesis is written in English Language and is 59 pages long, including 6 chapters, 7 figures, and 7 tables.

Annotations

Ettevõtte registreerimisprotsesside kohta kodanike arusaamise hindamine: Nigeeria koostöökomisjoni juhtum

Arenevad riigid, nagu näiteks Nigeeria, keskenduvad praegu oma jõupingutustele e-valitsuse ja teenuste digiteerimise poole. Kuigi see on positiivne, on oluline meeles pidada, et tõhusate e-valitsuse programmide loomine algab kodanikest ja nende rahuloluga e-teenustega. Kodanikele valitsusteenuste pakkumine digitaalse võrgustiku kaudu, näiteks veebiportaalide kaudu, suurendab avaliku sektori tõhusust ja läbipaistvust; kui aga e-teenuste osutamise tehnoloogiad ja -protsessid on keerulised või ebaselged, võib see mõjutada kodanike arusaamist ja rahulolu valitsusteenustega. See väitekirja eesmärk on uurida ja anda parem arusaam kodanike arusaam ettevõtete registreerimise teenusest, mida pakub Nigeeria ettevõtete asjade komisjon (CAC) portaali kaudu. Uuringus keskenduti portaali kasutatavusele, registreerimisprotsessile ja üldisele kodaniku rahulolule komisjoni poolt portaali kaudu pakutava teenusega. Arutati komisjoni portaali ja ettevõtete registreerimise protsessi üle. Samuti käsitleti eelmisi uuringuid ja teooriaid kodanike kogemuste, tehnoloogia vastuvõtmise, kasutaja rahulolu, teenuse kvaliteedi, protsessi ja e-valitsuse teenuste portaalide kasutatavuse kohta. Kodanike vastuste saamiseks kasutati veebipõhist küsimustiku. 78 vastust analüüsiti Excel'i abil demograafiliste omaduste ja muude muutujate põhjal, samas kui sobivaid tehnikaid kasutati kehtivuse kontrollimiseks ja muutujate vaheliste suhete kindlakstegemiseks. Tulemuseks oli avalikustada kodanike arusaam ja väljakutsed, mis mõjutavad nende rahulolu ettevõtete registreerimise teenusega, mida CAC pakub teenindusportaali kaudu. Soovitati parandada ja teha võimalikke uuringuid.

Võtmesõnad: Kodanike rahulolu, protsesside väljakutsed, kasutatavus, kasutaja rahulolu, kasutajakogemus, elektroonilise äriregistreerimine, Nigeeria, CAC, teenindusportaal.

See väitekiri on kirjutatud inglise keeles ja on 59 lehekülge pikk, sealhulgas 6 peatükki, 7 joonistust ja 7 tabelit.

List of abbreviations and terms

CAC	Cooperate Affairs Commission
EBR	Electronic Business Registration
IT	Information Technology
UNDPEPA	United Nations Division for Public Economics and Public Administration
ASPA	American Society for Public Administration
NPM	New Public Management
DEG	Digital Era Governance
EIU	Economist Intelligence Unit
PEOU	Perceived Ease of Use
PU	Perceived Usefulness
TRA	Theory of Reasoned Action
ICT	Information and Communication Technology
NPM	New Public Management
TAM	Technology Acceptance Model
SME	Small and medium-sized enterprises

Table of contents

Author's declaration of originality 3
Abstract 4
Annotations Ettevõtte registreerimisprotsesside kohta kodanike arusaamise hindamine: Nigeeria koostöökomisjoni juhtum 5
List of abbreviations and terms 6
Table of contents 7
List of Figures 10
List of tables 11
1 Introduction 12
1.1 Background to the Study 12
1.2 Problem Statement 13
1.3 Aims/Objectives of Study 13
1.4 Research Questions 14
1.5 Hypotheses 15
1.6 Significance of the Study 15
2 Literature Review 17
2.1 Conceptual Review 17
2.1.1 Case Background 17
2.1.2 Corporate Affairs Powers and Duties Board 17
2.1.3 Process of registering a local business in the CAC portal 18
2.1.4 Business Registration 19
2.1.5 Business Registration in Nigeria as a Study Context 20
2.1.6 E-government 21
2.1.7 E-readiness 22
2.1.8 Phases of E-Government 22
2.1.9 Domains of e-governance and e-administration 25
2.1.10 Types of Service Delivery in E-governance and E-administration 25
2.1.11 The Principles and Objectives of E-governance and e- administration 26

2.1.12 Advantages of e-government Implementation 26
2.1.13 Electronic Business Registration in Developing Countries..... 27
2.1.14 Benefits of Electronic Business Registration in Developing Countries..... 29
2.1.15 Challenges of Electronic Business Registration in Developing Countries . 29
2.1.16 Usability 31
2.1.17 Portal Usability and User Experience..... 31
2.1.18 Perceived Ease of Use 32
2.1.19 Perceived Usefulness..... 32
2.1.20 Citizen-Centered Services 33
2.2 Theoretical Review..... 34
2.2.1 Technology acceptance model (TAM)..... 34
2.2.2 Service Quality Models 35
2.2.3 The Onion Ring Model..... 36
2.2.4 Information System User Satisfaction Model 38
2.3 Empirical Review 39
3 Research Methodology..... 41
3.1 Research Design 41
3.2 Sampling Methods/Techniques Sampling Methods/Techniques 41
3.3 Data Collection Methods/Techniques 41
3.4 Data Recording/Transformation/Analysis Methods/Techniques 42
4 Data Presentation, Analysis, and Interpretation. 43
4.1 Preamble 43
4.2 Demographic Data..... 43
4.3 Data Analysis and Presentation of the Main Questions 45
4.4 Reliability and Validity Test Results..... 51
4.5 Test of Hypothesis..... 52
5 Discussion of Findings, Summary, and Recommendations 57
5.1 Preamble 57
5.2 Discussion of Findings 57
5.3 Summary and Conclusion..... 59
5.4 Recommendations 60
6 Contribution to Knowledge, Limitations of the Study, and Suggestions for Further Studies 62
6.1 Contribution to Knowledge 62

6.2 Limitations of the Study 62
6.3 Suggestion for Further Studies 63
References 64
Appendix 1 – Non-exclusive license for reproduction and publication of a graduation thesis 68
Appendix 2 69

List of Figures

Figure 1 The Onion Ring Model 37
Figure 2 Graphical Representation of Demographic Data 43
Figure 3 Cross Tabulation of Usability Challenges and Educational Qualification..... 53
Figure 4 Cross Tabulation of Process Challenges of The CAC Portal and Age Group. 54
Figure 5 Cross-Tabulation of User Satisfaction of the CAC Portal and Type of Business. 54
Figure 6 Tabulation of Usability Challenges and User Satisfaction of the CAC Portal 55
Figure 7 Tabulation of Process Challenges and User Satisfaction of the CAC portal... 55

List of tables

Table 1 Demographic Data and Percentages 44
Table 2 Role of CAC as an organizational body 45
Table 3 Role of the CAC Portal 46
Table 4 Usability Challenges 47
Table 5 Process Challenges 49
Table 6 Citizen's Satisfaction with CAC service delivery 50
Table 7 Cronbach's alpha Test Results 52

1 Introduction

1.1 Background to the Study

Service Provision in the Public sector is one of the main purposes and goals of any government. There is a need to focus not only on making services available but also paying attention to delivering citizen-driven services. Business registration in Nigeria is a process governed by the public sector under the umbrella of the Cooperate Affairs Commission (CAC) and needs to be Citizen centered to achieve its aim of service. The Commission has been offering online company registration since 2005, to catch up to worldwide standards of e-service delivery. As a result, both international and domestic clients can use an e-payment system based on smart cards to pay for the Commission's services from anywhere in the world. (Agboola, 2016) (Umenweke M. N., 2011)

Business registration through the Corporate Affairs Commission (CAC) is made possible through e-government. E-government is receiving a lot of attention from governments everywhere. More nations throughout the globe are developing and using e-government technology to save spending, improve services, save time, and boost efficiency in the public sector. E-government and the internet, enabled by modern communication and computing technologies, have caused profound shifts in the social order, cultural norms, and economic practices of modern societies. Among the many possible meanings of the word "e-government" is the distribution of personal computers to government workers, the digitization and subsequent online availability of historical data, and the migration of previously manual processes into a computerized setting.

Numerous strategies are used by different governments to expand their online administrations. Detailed plans for the future have been created in some instances. However, other organizations have decided to focus on just a few key objectives at the outset of their project. To eventually reach their full potential, even the most prosperous nations had to take tiny steps at first. When studying the implementation of e-government, academics generally divide the process into several separate phases. The Corporate Affairs Commission is also designed in the pattern model with the focus to optimize

government presence online as well as their provision of quality service for registration of business.

1.2 Problem Statement

There seem to be gaps in citizens' experience with the Business registration process. These gaps in the registration process include both the commission's business registration portal and the overall business registration process. From inconsistent user-friendly online experience which sometimes leads to citizens employing the services of registration agents which attract additional fees, to lengthy queues with in-person visits, and corrupt practices with uneven service quality. This prompts questions about the whole process and if it was designed with citizens in mind. (Umenweke M. N., 2011) identified the following as the problem of business registration in Nigeria:

- Power Supply
- Poor Postal Services
- Low Literacy Level
- Low Computer Literacy and Internet availability
- Inadequate ICT Infrastructure
- Inadequate Legal Framework
- Poor portal design
- Red tape or excessive bureaucracy, invariably means that it takes a longer time to register a business.
- Corrupt practices in the registration process, these practices are perpetuated by some government staff.

These problems have given rise to the need to evaluate the business registration process as a whole including the registration portal- to assess user experience and usability.

1.3 Aims/Objectives of Study

The highlighted challenges with registering a business in Nigeria through the Corporate Affairs Commission drive the need for research to ascertain how citizen-centered the whole business registration process is, including the web portal. (Eniola, 2019) examined entrepreneurship as a Business Organization: from the Nigeria Perspective. In their study,

they made a cursory attempt at reviewing the business registration process but no attempt to evaluate the business registration portal in Nigeria. This current study is handy, in the sense that it will help to provide much-needed information on Citizen perception and experience with the business registration service offered by CAC through the web portal. This research will help add to a deeper comprehension of the citizen-centricity of e-government services in developing countries through the study of a specific service (business registration) in Nigeria which is delivered by the Cooperate Affairs Commission (CAC).

1.4 Research Questions

The following research questions will be answered in this project:

MRQ 1. What are the Citizens' perceptions of the business registration process in Nigeria?

SQ 1: What is the existing process of registering a local company in Nigeria?

a. Organizationally, what role does the CAC play in business registration?

b. What role does the CAC portal play in the local business registration process?

SQ 2. How do Users perceive and use the CAC portal as a government service?

a. What are the main usability challenges faced when registering a company through the CAC portal? (ease of use, accessibility, etc.)

b. What are the main process challenges entrepreneurs face when registering a business in Nigeria? (Process KPIs, response time, payment, security, error support)

SQ 3. What recommendations can be given for improving the portal and the registration process?

1.5 Hypotheses

To give direction to this study, the following null hypotheses were formed.

Ho1: There is no significant association between the usability challenges of the CAC portal and educational qualification.

Ho2: There is no significant association between the process challenges of the CAC portal and age group.

Ho3: There is no significant association between user satisfaction with the CAC portal and Type of business.

Ho4: There is no significant association between usability challenges and user satisfaction with the CAC Portal.

Ho5: There is no significant association between the process challenges of the CAC portal and user satisfaction.

1.6 Significance of the Study

There have been few studies carried out on business registration and E-government service portals- for example, (Uchenna, 2020) investigated e-service quality dimensions and User Satisfaction with e-governance Service portals. (Cele, 2017) examined the challenges faced by all businesses in registering companies in Rural Kwazulu-Nata. The study is significant in the sense that the information and knowledge obtained from the finding will be beneficial to different categories and stakeholders.

The study is important to the government agency responsible for business registration. It will be a repository of information as it will enable the government to decipher the level of ease of use, level of usefulness, and user satisfaction of the CAC portal. Such information and knowledge will enable the improvement of the user experience as well as the user interface of the portal. Furthermore, it helps them improve the portal, improve the ease of use and improve user satisfaction in general. The research will be beneficial to entrepreneurs and business owners who are interested in setting up and registering their local businesses. The study will enlighten them on the prevailing process of business registration in Nigeria and the appropriate agency responsible for business registration in

Nigeria. The research will be a repository of information on e-governance technologies and services for researchers and students of information technology. It will serve as a foundation for building and further studies in the related field. In addition, future studies can reference the studies where necessary.

2 Literature Review

The literature review section will be reviewed under three subheadings namely, conceptual review, theoretical review, and empirical review.

2.1 Conceptual Review

This section will focus on discussing the relevant related concept in the study namely assessing the citizen-driven business registration process. Concepts such as Corporate Affairs Commission, business registration, service quality, user experience, usability, the process of registering a local business in the CAC portal, and citizen-driven services will be discussed.

2.1.1 Case Background

The Corporate Affairs Commission is a body of the Nigerian Government responsible for the regulation and management of companies in Nigeria. Before we explore how to register your business name with the body, there are advantages associated with being a registered business with the CAC. Corporate Affairs Commence (CAC) is in charge of the registration of businesses, and the creation of lawful entities.

Several advantages have been associated with registering a business name with the CAC. It improves customer trust in a business. It introduces structure to a business. It allows businesses to access certain premium features that are specific to each platform. Registering businesses are required by Nigerian law.

2.1.2 Corporate Affairs Powers and Duties Board

- According to Section 7 of the Companies and Allied Matters Act, the Commission is responsible for the following.
- Establish and maintain a system for the oversight and control of the company formation, organization, administration, and dissolution processes.

- To create and maintain business registrations and offices across the Federation that are properly staffed and equipped to carry out their duties under the Act and any other laws for which it is responsible;
- Investigate the goings-on of any corporation when the public and shareholder interests need it;
- To carry out other duties as may be required by any Act or Enactment;
- Pursue any other measures deemed necessary or advisable for implementing the Act's objectives.

Among its many other functions, the Commission issues business names and Incorporated Trustees. In passing, it has been suggested that the Securities and Exchange Commission's powers, duties, and jurisdiction under the Investment and Securities Act 8 should not be compromised by the separation of these roles.

2.1.3 Process of registering a local business in the CAC portal

How to Register a Business with the Corporate Affairs Commission.

- **Account creation on the portal:** First, there is a need to create an account with the commission through the portal (services.cac.gov.ng). To register, the required details include Name, Date of birth, gender, nationality, email, and so on. A username and password would also need to be created.
- **Account verification:** After registration, a link to verify the account would be sent to the business owner's registered email address. He will need to do this on time as the link expires after 24 hours. Once the account is verified, then login to their dashboard is possible through the portal.
- **Name search:** A name search is required to know if a business name about to be registered has been registered or trademarked before, by someone else. If it has, it cannot be registered again. Hence, the registrar would need a new name. At this stage, it is advisable to have more than one (proposed) business name in mind, so there are no surprises.
- **Reservation of chosen name:** After deciding on a business name to go with, the next step is to reserve that name (so another person does not snatch it). Here, the classification "Business name" has to be specified on the portal as the actual Business name too. CAC reserves the right to disapprove any business name based on certain issues that are spelled out on the Portal reservation page. The reason

for the search and nature of business would further be required and in the same vein, further personal details. Reservation of name is priced at Five hundred naira only (N500) and it can be paid online.

- **Business name approval & more information:** After payment for the reservation of the business name is made, it could get approved after some days. Then, the applicant would be prompted to provide more information e.g. the primary business address, the names of the business owners, and so on.
- **Payment for the business name**: Another payment of N10,000 would be required for the actual business name registration. Please note that the initial payment of N500 was meant for just reserving the business name, not for registration. The new payment is meant for registration.
- **Download, print, fill, and submit form six:** After payment of the registration fee, a "Form Six" would be provided for the applicant to fill. The applicant downloads this form, prints it, and fills in all the necessary details which might include passports, names, signatures, and other vital information. This form, after proper filling, would be scanned and uploaded back to a portal that will be provided.
- **Business certificate collection:** After a while, the business name certificate gets ready. An invitation will be sent to the applicant to visit the office and collect the certificate. Also required here include those documents that were printed and uploaded. Once an applicant visits the office and collects the certificate, a registered business name is born.

2.1.4 Business Registration

Business registration has an impact on a free-flowing economy, especially in developing countries. The law considers a corporation to be a distinct legal entity. It has the same rights and privileges as a natural person since it can own property, transact under its common seal, incur debts, sue and be sued in its name, and incur liabilities. Registration guarantees business continuity. This concept is often referred to as perpetual succession. The withdrawal or demise of one of the business's owners will not impact the company's viability. It protects you legally as it prevents other businesses from using your business name since it is reserved only for you. It restricts one's culpability by preventing one from being held personally accountable for specific accidents and other risks. It provides the

chance to acquire a certificate of incorporation. Registration strengthens trust between businesses, partners, and customers.

2.1.5 Business Registration in Nigeria as a Study Context

Following the strain on the majority of the Nigerian populace with 210 million persons, and the decline in foreign trade and GDP, as well as a proportional increase in food and fuel prices; It has been necessary to find an alternative solution outside of the over-dependence on civil and public service employment. The government's policies have always been to support the creation of SMEs (Agboola, 2016) by citizens, as it is widely held that these businesses help to drive the economy, raise household incomes, and improve people's quality of life through the selling of products and the provision of services. Data has shown a massive increase in Entrepreneurship over the years in Nigeria. To prevent disorderliness and promote standards in the business environment, the government has the sole responsibility to ensure that businesses are set up appropriately to operate in its space. One of the ways it achieves this objective is business registration. Over the years, some entrepreneurs seeking to set up their businesses have had to go through a rigorous process and unnecessary waste of time and resources to simply register their businesses.

The initial steps in starting a company in Nigeria include checking the availability of the desired name of the new business on the Corporate Affairs Commission (CAC) portal. The name reservation comes with a fee which then proceeds to the next phase of filling out e-forms and additional fees for the online registration process. Once the suggested name has been accepted by the CAC, the company's memorandum and articles of organization will be drafted, signed, and filed with the CAC for registration. After that, a Certificate of Incorporation will be issued by the CAC.

Business registration depends on the type of business one intends to operate. If, for instance, you want to operate a sole trade and/or partnership business- all that is required, is only business name registration. Businesses that require incorporation, i.e. limited liability companies, must be duly registered as a legal entity, distinct and separate from the owners of the business. Under business name registration, there is no legal difference between the business owner and the business.

2.1.6 E-government

E-government can signify many things, but one of them is the provision of governmental resources and services via electronic networks (West, 2001). Other definitions exist as well. In addition, giving individuals, corporations, and other government agencies access to national information and services over the internet and the world wide web is what is meant by the definition of e-Government in a study by the United Nations Division for Public Economics and Public Administration (UNDPEPA) and the American Society for Public Administration (ASPA). In addition, it was defined as the application of information and communications technology (ICT) to the goal of promoting and enhancing interactions between governments and the people they serve (WorldBank, 2001). (Deloitte, 2000) describes e-government as the practice of leveraging ICT, such as the Internet, to enhance the quality of services offered by the government to its citizens.

E-Government, or the use of information technology to improve government transparency, information delivery speed to all residents, administrative efficacy, and the quality of essential public services like transportation, power, healthcare, water supply, and public safety, is a widely adopted practice. Technologies such as devices, hardware, software, and power circuits have all played important roles in administration for years. As the purview of government has grown to encompass previously ungoverned portions of the world and more intimate contacts, more complex assemblages of technically stored and dispersed knowledge have become necessary (Coleman, 2002).

E-Government is the use of ICTs in governmental processes. E-government is the driving force behind New Public Management (NPM), which also incorporates practices from the commercial sector. In contrast, the ideas behind Digital Era Governance (DEG) are a development of NPM and will form the basis of future public administration (Dunleavy, 2006). Enhancing the effectiveness of the government is the main focus. E-governance is the use of information and communication technologies by governments to improve service delivery, encourage citizen involvement in policy-making, and promote government efficiency and effectiveness. For e-governance to work, there must be a departure from the old ways of doing things in terms of leadership, policymaking, public discourse, resource allocation, education delivery, citizen involvement, and information management and service supply. Since e-governance can transform citizens' interactions with both their government and each other, most people agree that it involves more than

just e-government. E-governance has the potential to offer new concepts in the area of people's rights and responsibilities. The citizen is meant to be actively involved, given tools, and given more control (www.unesco.org).

Key elements of e-governance include information on the representation and regulation of social actors, the operations of public service providers, and the production and spread of official information by government agencies (Coleman, 2002). E-governance refers to a broader concept than simply a government-run website. E-governance is an initiative to modernize the governing process through the use of electronic means for the benefit of governments, individuals, and businesses. Connecting and strengthening these three groups' processes and actions through the use of ICTs is possible. Thus, in e-governance, technology is utilized to facilitate and support efficient government operations.

2.1.7 E-readiness

The introduction of the term "e-readiness" (also known as electronic readiness) is very important because it is generally recognized as an essential component in the implementation of e-government. When a nation is considered to be "e-ready," it indicates that it possesses the necessary infrastructure to grow its economy and enhance its welfare (Deloitte, 2000) by making use of ICT. In addition, e-readiness is defined as the extent to which a nation’s customers, organizations, and governments can make productive use of ICT (Economist Intelligence Unit, 2008). Several different indexes can be used to make worldwide comparisons; some of these are compiled by the United Nations, some by The Economist Intelligence Unit (EIU), and still others by the World Bank.

2.1.8 Phases of E-Government

The rollout of e-government occurs in stages. Here, we take stock of the existing canon and map out the e-rollout process in detail. It includes research from organizations like Gartner Research (WorldBank, 2001).

2.1.8.1 UN/ ASPA Study – Five Stages of E-government Model

The report "Benchmarking E-government: A Global Perspective, Assessing the Progress of the UN Member States (UN, 2002) identifies five stages of e-government development that are employed in quantitatively evaluating the evolution of e-government. According to the study, each jurisdiction's level of development in the realm of electronic governance can be inferred from the content and functioning of its official websites.

Stage 1: **Emerging**: in this stage, the government's official online presence consists of a small number of standalone sites. Limited, simplistic, and static information is available.

Stage 2: **Enhanced**: More government resources and more dynamic information are part of the second phase of development. Content and data are regularly updated.

Stage 3: **Interactive**: users can do things like schedule appointments, submit requests, and download and submit forms.

Stage 4: **Transactional**: The next stage is transactional when users can conduct business in the virtual world, such as making purchases.

Stage 5: **Seamless**: The final stage, seamless, involves the complete integration of all e-services across all organizational boundaries. Combining all of an organization's electronic services and procedures across all departments and departments inside the organization.

2.1.8.2 Gartner Study - Four Stages of E-government Model

(Baum, 2000) The e-government model proposed by Gartner may be broken down into four distinct stages to track the progress of e-government initiatives and plot a course to better serve citizens. This can be used as a standard against which the project's potential contribution to an E-government strategy can be evaluated.

Stage 1: **Presence**: A website that only serves to relay information is considered to be at this stage. Such sites are frequently derisively called "brochure ware" since they lack the interactivity of more advanced websites.

Stage 2: **Interaction**: Contact can be established on a fundamental level. Email communication and interactive forms that provide useful responses are hallmarks of interaction-stage websites.

Stage 3: **Transaction**: Finally, business dealings can be finalized, such as the renewal of licenses, the payment of taxes or fees, or the filing of bids for procurement contracts.

Stage 4: **Transformation**: this stage is the most in keeping with the concept of governance since it necessitates a revamping of traditional ideas about what government should be and how it should be organized.

2.1.8.3 Layne & Lee Study – Four Stage E-government Model

To help public managers think about e-government and their organizations, (Layne, 2001) established the Four-Phase E-Government Model that includes four stages of e-government development.

Stage 1: **Cataloguing**: First, states make an initial effort to establish an online presence for government services.

Stage 2: **Transaction**: The "transaction" phase of an e-Government project involves establishing a connection between a government agency's internal systems and an online user interface to enable electronic transactions between the agency and its constituents.

Stage 3: **Vertical integration**: Cooperation between local, state, and federal governments is required for third-stage vertical integration.

Stage 4: **Horizontal integration**: In the fourth phase, known as horizontal integration, processes from different divisions are merged to create brand-new offerings. The expected order of e-government development phases places vertical integration of e-government first, across all levels of similar functioning, followed by horizontal integration of e-government.

2.1.8.4 World Bank study - Three Phases of E-government Model

To help policymakers and strategists formulate their plans and initiatives,(Centre for Democracy and Technology, 2002) e-government handbook provides a blueprint for rolling out online government services in three phases. These steps are not necessarily in any particular order, and some may occur before others, but they do offer three distinct conceptual frameworks through which to think about the objectives of e-government.

Publish: The information and data collected by the government are published on these sites in the hopes that they will be seen by as many people as possible. To that end, government publishing sites will serve as the spearhead of the country's expansion into the online world.

Interact: At its core, interactive e-government facilitates two-way communication between government employees and the people they serve. This might begin with seemingly banal features, such as email accounts for government officials and online feedback forms.

Transact: To better serve its citizens, the government has made its services available to the public via the Internet. A transactional website makes it possible to access government resources whenever they are required. The efficiency of both the public and private sectors can increase because of the expedited and cheaply priced government help and approval processes made possible by transact sites.

2.1.9 Domains of e-governance and e-administration

To simplify the concept of e-governance, it can be divided into three main categories:

- **E-administration**: The primary objective of electronic administration, or "e-administration," is to enhance the internal operations of the public sector by reducing the cost of administrative procedures, increasing the efficiency of those procedures, fostering better connections between various government agencies, and giving citizens a greater say in how their tax is spent.
- **E-services**: All e-services initiatives should aim to improve the quality of government services and increase two-way communication with citizens. Public service institutions that offer online services are a useful case in point.
- **E-society**: As with the e-society projects for business licenses through a government website, a method to grow the e-services domain is to target institutional stakeholders such as private sector service providers, other governmental agencies, and non-profit and community-based organizations. With this goal in mind, e-society projects like the creation of a portal for the business, stress the importance of fostering lasting connections between companies and their clientele.

The three components of e-governance usually work together to form a unified system (Arjan de Jager, 2008)

2.1.10 Types of Service Delivery in E-governance and E-administration

(Onuigbo, 2015) identified four models popularly known for providing government services online. Four main areas highlighted by the authors as popularly prioritized to explain service delivery with the use of ICTs in government include:

- G2C (Government-to-Citizens): G2C projects prioritize the development of central locations where citizens can utilize various high-quality government services and resources.

- G2B (Government-to-Business): G2B seeks to expand the capacities of business transactions among the public and private sectors by enhancing communication and connectivity between them.
- G2G (Government-to-Government): G2G describes a cooperative effort between different levels of government to improve daily administrative operations through increased information sharing and service provision. The primary purpose of this plan was to increase the effectiveness and efficiency of government operations.
- Intra-government: According to Islam and Ahmed, this aims to employ ICT to improve administrative and managerial efficiency and effectiveness (Onuigbo R. A., 2015)

2.1.11 The Principles and Objectives of E-governance and e- administration

- These include:
- Design services around the preferences of the public.
- Make the government more approachable.
- Promote community integration.
- Distribute data in a trustworthy manner.
- Maximize funds collected from the tax.

The goal is to enhance the smooth relationship between government and citizens such that services will be quickly disseminated efficiently and seamlessly without the need for mediators.

2.1.12 Advantages of e-government Implementation

Positive results from e-government implementation are shown in most countries (Ndou, 2004). There are, however, many positive outcomes that can result from implementing e-government software. E-government apps make government services more accessible to citizens, businesses, and other government agencies 24 hours a day, seven days a week, increasing efficiency and effectiveness (Ndou, 2004). According to (W. Seifert and G. Bonham, 2003), implementing e-government will simplify and reorganize administrative tasks, leading to reduced costs and better resource use. The usage of e-government technology will also improve the effectiveness and efficiency with which governments provide services to the public (Rubin, 2004). And as (S. Cohen, 2002) pointed out, e-government may help governments save money and provide better services to the public

by increasing efficiency, decreasing transaction costs, increasing transparency, and providing more options for citizens. There are many benefits to e-government, and (OECD, 2003) lists some of them:

- Saving money, time, and resources for customers and businesses
- Increase in citizen contentment and efficiency in receiving services
- Expansion of people's ability to access computers, the internet, and other forms of information technology
- Creation of new business and work opportunities.

Also, (OECD, 2003) listed various advantages of e-government implementation including;

- Boosts government agencies' data processing efficiencies.
- Improves services by gaining a deeper understanding of customers' wants and needs.
- Aims towards streamlined online service delivery.
- Boosts the government's ability to communicate with its citizens and the accuracy of the information they share, both of which support the government's economic policy objectives.
- Increasing openness, precision, and ease of information transformation between the government and its constituents.
- Online tactics that include citizens in the strategic planning effort and establish government transparency and accountability help foster a culture of responsibility between governments and their constituents, which is vital for effective governance.

After weighing the pros and cons, it's clear that e-government is the way to go (W. Seifert and G. Bonham, 2003) since it not only helps the government cut costs but also improves service quality and decreases wait times.

2.1.13 Electronic Business Registration in Developing Countries

Electronic Business Registration (EBR) is the process of registering businesses online. It is a system that simplifies and automates the registration process for businesses, making it easier and faster for them to start and operate legally (WorldBank, 2001). EBR has become increasingly popular in recent years, especially in developing countries where

traditional paper-based registration processes are often slow and bureaucratic. In this article, we will discuss EBR in developing countries, its benefits, challenges, and the way forward. Electronic Business Registration (EBR) has the potential to significantly improve the business environment in developing countries by simplifying and automating the registration process for businesses (Layne, 2001). By eliminating the need for businesses to physically go to registration offices, EBR can reduce the time it takes to register, increase efficiency, and reduce costs associated with paper-based applications. In addition, EBR can also improve access to finance for small and medium-sized enterprises (SMEs) by making it easier for them to register and obtain the necessary documents to apply for loans and grants.

However, the adoption of EBR in developing countries also comes with its own set of challenges. One of the key challenges is infrastructure. Many developing countries lack the necessary technological infrastructure, such as reliable internet connections and hardware, to support EBR. This can contribute to a tough registration process.

Another challenge is the digital divide. EBR may widen the digital divide between businesses with access to technology and those without, which could limit adoption and exacerbate existing inequalities. To address this challenge, governments can provide access to technology and digital literacy training to SMEs, in addition to investing in the necessary infrastructure (OECD, 2003)

Awareness and education is also a challenge that must be addressed. Many small businesses may not be aware of the benefits of EBR or how to use the system, which could limit adoption. Governments and other stakeholders can educate businesses on the benefits of EBR and provide training on how to use the system to overcome this challenge. Security is also a major concern when it comes to EBR. EBR systems must have robust security measures to protect sensitive business information and prevent fraud. This requires significant investment in technology and personnel to maintain and secure the system. Finally, resistance to change from government officials and other stakeholders may hinder the adoption of EBR. Engaging with stakeholders, such as government officials and business associations, can help build support for EBR and address resistance to change.

In conclusion, while EBR has the potential to revolutionize the business registration process in developing countries, it also comes with its own set of challenges. To ensure the success of EBR, governments, and other stakeholders must invest in the necessary infrastructure, bridge the digital divide, educate businesses on the benefits of the system, implement robust security measures, and engage with stakeholders to build support for the system. By doing so, EBR can be a powerful tool for promoting entrepreneurship and economic growth in developing countries.

2.1.14 Benefits of Electronic Business Registration in Developing Countries

The benefits of EBR in developing countries are numerous. According to the Global Urban Development, here are some of the key benefits:

- Faster Registration Process: EBR eliminates the need for businesses to physically go to registration offices, which can be time-consuming and costly. With EBR, businesses can complete the registration process online, reducing the time it takes to register.
- Increased Efficiency: EBR streamlines the registration process, making it more efficient and less prone to errors. This, in turn, reduces the burden on government officials who are responsible for processing and approving registration applications.
- Cost Reduction: EBR can reduce the cost of registration for businesses by eliminating the need for physical trips to registration offices, as well as the costs associated with paper-based applications.
- Transparency: EBR provides greater transparency in the registration process, making it easier for businesses to understand the requirements and regulations they must comply with to operate legally.
- Better Access to Finance: EBR can also improve access to finance for small and medium-sized enterprises (SMEs) by making it easier for them to register and obtain the necessary documents to apply for loans and grants.

2.1.15 Challenges of Electronic Business Registration in Developing Countries

Despite the benefits of EBR, several challenges developing countries face when implementing this system (Bojang, 2021). Here are some of the key challenges:

Infrastructure: EBR requires a reliable internet connection and other technological infrastructure, which may be lacking in some developing countries.

Digital Divide: EBR may also widen the digital divide between businesses with access to technology and those without.

Awareness: Many small businesses may not be aware of the benefits of EBR or how to use the system, which may limit adoption.

Security: EBR systems must be secure to protect sensitive business information and prevent fraud.

Resistance to Change: Resistance to change from government officials and other stakeholders may also hinder the adoption of EBR.

To overcome the challenges of EBR in developing countries, there are several actions that governments and other stakeholders can take. These include:

Building Infrastructure: Governments can invest in the necessary technological infrastructure to support EBR, such as reliable internet connections and hardware.

Digital Inclusion: Governments can also take steps to bridge the digital divide by providing access to technology and digital literacy training to SMEs.

Awareness and Education: Governments and other stakeholders can educate businesses on the benefits of EBR and provide training on how to use the system.

Security Measures: EBR systems must have robust security measures to protect sensitive business information and prevent fraud.

Stakeholder Engagement: Engaging with stakeholders, such as government officials and business associations, can help build support for EBR and address resistance to change.

EBR has the potential to significantly speed up, improve efficiency, and increase the transparency of the business registration process in underdeveloped nations. However, implementing EBR also comes with its own set of challenges. To ensure the success of EBR, governments, and other stakeholders must invest in the necessary infrastructure,

bridge the digital divide, and educate businesses on the benefits of the system. By doing so, EBR can be a powerful tool for promoting entrepreneurship and economic growth in developing countries.

2.1.16 Usability

Due to its significance in assessing how simple and effective it is for users to utilize a product to complete tasks, usability as a notion in Human-Computer Interaction research has attracted a lot of attention. Numerous research studies have shown that the usability of a product is a critical factor in determining its overall effectiveness and that products with good usability are more likely to be adopted and used regularly by their intended users. This is because users are more likely to stick with a product if they find it simple to use and navigate and if it effectively and efficiently serves their demands (Sonderegger, 2010).

In the context of electronic government websites, researchers have primarily focused on two sets of well-established usability heuristics - Nielsen's usability heuristics (Nielsen, 2017) and the six-dimensional framework (Baker, 2009)The Nielsen heuristics, which were first introduced by Nielsen and Molich in 1990 and later modified in 1994, have been widely used and published for evaluating the usability of user interfaces. These ten-item heuristics take into consideration several aspects of a user's experience, such as the ability to see the current state of the system, having the system correspond to real-world scenarios, providing the user with autonomy, adhering to established standards, preventing errors through learning from past mistakes, relying on recognition instead of memory, being adaptable and quick to use, having a streamlined appearance, assisting users in recognizing and fixing problems, and providing documentation and assistance (Nikiforova, 2020)

2.1.17 Portal Usability and User Experience

The levels of contentment, anticipation, and trust that citizens and individuals have towards government services online are greatly influenced by the ease of using these services. This was demonstrated by research conducted by a researcher (Magoutas, 2010) that quantified people's levels of contentment with electronic government offerings. The study considered various elements that could provide insight into the user's characteristics, including user-form interactions, website usability, security, content

quality, service reliability, and support systems. (Verdegem, 2009) carried out a study that involved a sample of 5590 participants to investigate the expectations of individuals towards the electronic government. The primary usability elements that have a considerable impact on user preferences, according to the study, are the accessibility of electronic government services, simplicity of website navigation, website loading speed, quality of the information supplied, and website flexibility. Improving the usability of electronic government websites has a long-term effect on the use of these services by individuals. (Kumar, 2007) undertook a study to propose a model for evaluating the impact of electronic government adoption on individuals, which included website design, service quality, personal satisfaction, and other factors. The study found that website design was an essential component that influenced users' overall experience and left a positive impression after their interaction with electronic government services. The researchers suggested that improving the site's design in terms of navigation, aesthetics, content, accessibility, and personalization would greatly encourage users to adopt electronic government services.

2.1.18 Perceived Ease of Use

A person's view of how simple it would be to utilize a specific system or piece of technology with the least amount of effort is referred to as perceived ease of use. It is associated with the concept of "ease," which refers to the absence of difficulty or the lack of significant effort required for a task. People commit a finite amount of effort to various tasks, and how easy something is to use can have a big impact on someone's willingness to use a system or piece of technology (Radner, 1975). An application that is viewed as being simpler to use will be likely to be accepted by users, all other things being equal.

2.1.19 Perceived Usefulness

The technology acceptance model shows that individuals are inclined to utilize a technology if it is evident that such new technology shall provide help to accomplish their objectives or tasks, and perceived usefulness is a key feature in this model. It is a person's subjective assessment of how much they think a certain technology will improve their ability to perform at work, their productivity, or their general well-being. The perceived usefulness of a system can be influenced by factors such as ease of use, compatibility with existing systems, and its ability to fulfill the user's needs and requirements. Perceived usefulness is a crucial factor in determining whether or not individuals will adopt a new

system in an organizational context. On the other hand, if the system is perceived as not useful or even detrimental to job performance, individuals may be less likely to adopt it or use it effectively. Therefore, positive reinforcement in an organization such as promotions, bonuses, and incentives are often given to individuals who exhibit good performance (Schein, 1990). Consequently, a system that is perceived to be useful is one in which the user perceives a favourable correlation between system use and enhancing their job performance.

2.1.20 Citizen-Centred Services

For electronic government initiatives to be successful, it is essential to prioritize citizen-driven services as citizens' satisfaction and experience are crucial factors in the adoption and acceptance of such initiatives (Millard, 2011)Therefore, it is recommended to begin with citizens rather than technologies, as involving people in the early stages of service design is the most effective approach. This involves focusing on the needs and priorities of citizens to design services that meet their satisfaction. Online services must be designed and delivered with citizens in mind, ensuring that information is easily accessible, understandable, and available to them.

The primary services offered by an electronic government portal should be presented in a way that is centred around the citizen, allowing users to feel secure and comfortable when accessing these services. User-driven personalization, co-production, citizen empowerment, and location-based services are the four fundamental components of a demand-driven approach for citizen-driven services. The idea of universal personalization, which tries to strike a balance between top-down, data-driven government and bottom-up, public participation, is fundamentally based on these elements. By prioritizing citizens and their needs, this approach can lead to greater satisfaction, adoption, and acceptance of electronic government services (Millard, 2011).

For a personalized citizen experience, government service portals need to have additional features and capabilities that cater to the diverse ethnicities of citizens. Cultural connections can play a role in a user's adoption of a website if they can interact with it in their native language. As a result, countries with diverse linguistic populations should have multilingual options available on their service portals to enhance the user experience. Citizen empowerment is a critical aspect of citizen-driven services, especially for citizens who may have limited experience or exposure to technology. (Singh, 2008)

Providing resources such as online demonstrations, trials, and voice assistants can have a positive impact on citizens' attitudes toward using e-services (Sarkar, 2004). Due to the poor integration of government departments and the lack of self-service capabilities, citizens may occasionally need to ask for assistance from government employees to carry out specific tasks. On the other hand, citizen-driven services that are designed with convenient and less cumbersome processes can change citizens' attitudes towards self-service, allowing them to complete tasks with minimal manual intervention and less help from government officials. This can reduce in-person visits to government offices, long queues, and instances of bribery and corruption.

2.2 Theoretical Review

The study's theoretical review is founded on three models: Technology Acceptance Model (TAM), Service Quality (SERVQUAL), and Information System User Satisfaction Model.

2.2.1 Technology acceptance model (TAM)

The first model “TAM” which (Davis, 1985)initially put forth, is a popular framework for analysing the acceptance behaviour of individuals. The Technology Acceptance Model (TAM) model is based on the Theory of Reasoned Action (TRA) which contends that attitudes and intentions shape action through the effect of beliefs. Perceived usefulness (PU) and perceived ease of use (PEOU), according to TAM, are the two major variables that affect a user’s behavioural intention when associating with new technology. These beliefs ultimately shape users' overall behavioural intention in association with technology. End-users' beliefs about technology are fundamentally shaped by PU and PEOU, which in turn shapes their attitude toward the technology and affects its acceptability. Davis carried out some tests to support the TAM model. PEOU and PU were the independent variable and use was the dependent variable. This research showed PEOU and PU were significantly correlated with both current and future system usage. Davis' experiments showed that while both PEOU and PU are important factors in determining technology acceptance, PU has a stronger correlation with system usage than PEOU.

Over the past decade, the TAM model has been widely tested and has gained significant empirical support. Between 1989 and 2001, approximately 100 studies related to TAM

were published with variations in sample sizes and user groups with other variety of differences in the research. Furthermore, the TAM model has been applied to various end-user technologies, including but not limited to email, word processors, groupware, spreadsheets, and the World Wide Web. The original TAM has been extended in other studies by the addition of new predictors, including cultural elements and gender differences. Despite these variations, researchers generally agree that TAM is a valid, concise, and durable model, which has been applied across a wide range of technologies and user groups, analysed with different statistical methods, and compared with alternative models. The original TAM has been enhanced by research with the addition of new predictors, including elements like gender, culture, experience, and self-efficacy. Despite these differences, experts generally concur that TAM is a viable, succinct, and long-lasting model that has been used across a variety of technologies and user groups, examined using various statistical approaches, and compared with alternative models.

2.2.2 Service Quality Models

Service Quality models are used to measure the gap between customer expectations and perceived service performance, to identify areas for improvement, and enhance customer satisfaction. These models typically focus on the dimensions of service quality that are most important to customers, such as reliability, responsiveness, assurance, empathy, and tangibles (physical facilities, equipment, and appearance of personnel). Service quality is a crucial aspect of organizational sustainability and success as it covers both the functional and physical elements of service delivery. In 1985, the SERVQUAL model was introduced by Parasuraman, Berry, and Zeithmal with ninety-seven entities in 10 SERVQUAL dimensions. Subsequently, the number of dimensions in the Service Quality model was reduced from ten to five, and the total number of items was reduced to 22. Physical, which refers to tangible amenities, functional attractiveness, and staff appearance, is one of these dimensions; Serviceability, which relates to the capacity to deliver services accurately and trustworthily; responsiveness, which reflects the willingness to help clients and deliver on-time service; assurance, which speaks to the staff's expertise and capacity to win consumers' trust and confidence and empathy, which entails giving clients individualized care and attention. With the advent of technology and the integration of the internet into our daily lives, newer models such as WEBQUAL, SITEQUAL, and E-S-QUAL have been introduced to cover the use of technology in delivering services. (Yoo, 2001) proposed SITEQUAL, a paradigm for evaluating the

quality of website online services, which has four dimensions: usability, design aesthetics, computing power, and communicative responsiveness. (Parasuraman, 2005) expanded the dimensions to seven with the e-service quality scale, which was later refined to a nine-dimensional scale by authors (Kim, 2006) for content analysis and assessment of government or organization websites. Apart from the conventional service quality models.

Self-Service Technology (SST) and Organizational Quality are also significant for analysing service quality. Technology interfaces such as SST allow clients to self-produce services without the assistance of service personnel (Meuter, 2000). (Hien, 2014) on the other hand, refers to organizational quality as the administration and support of an entity and comprises all internal procedures for providing e-services to customers from the back office. (Nguyen, 2014) proposed that Internal organizational procedures have a big impact on how well e-services are perceived by citizens.

2.2.3 The Onion Ring Model

The Onion Ring Model, which was introduced by (Heeks, 2005)is a holistic model for e-development that highlights a systematic approach to the process, with information as the main driving force and technology playing a supporting role. The encompassing system must be taken into account and modified to match the unique circumstances while building e-governance, in addition to the Infrastructural development.

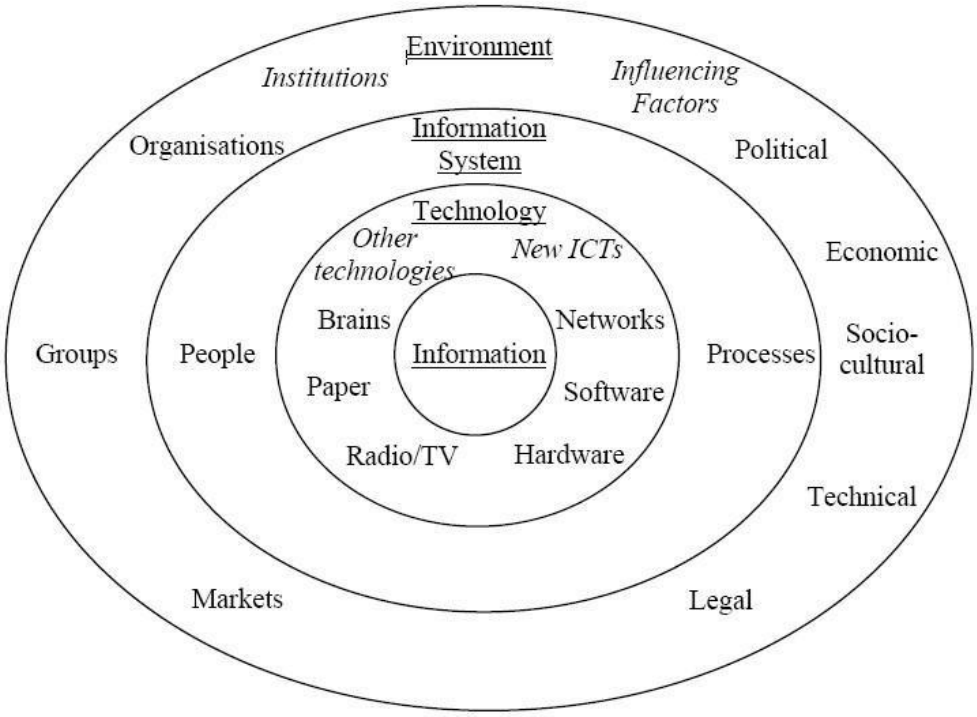

Figure 1 The Onion Ring Model

The Onion Ring Model proposed by (Heeks, 2005)consists of four main components, namely information, technologies, information systems, and environment. In the Onion Ring Model proposed by (Heeks, 2005), information is viewed as the foundation of e-development. It's critical to first comprehend the function of information to properly comprehend the role of information and communication technologies (ICTs) in technological development. The term 'technology' in this context refers to both traditional and new forms of ICTs, which may include networks, software, hardware, paper, radio/TV, and even human knowledge. Information systems are a combination of algorithmic processes, data, technology, and people, who interact with ICTs in support of business processes. It's not limited to just an organization's use of ICTs, but also the arrangement of individuals involved in this interaction.

The environmental component of the Onion Ring Model by Heeks refers to the broader context in which information systems and e-development projects exist. Political, economic, social, cultural, legal, and regulatory concerns are among them, along with the attitudes and behaviours of stakeholders, such as end users and developers. Understanding this context is essential to designing and implementing effective e-development projects that meet the needs and expectations of all stakeholders involved. (Heeks, 2005)refers to information systems as trees with roots hidden in the surrounding soil of organizations, institutions, and the environment, political, economic, cultural, etc.

The environmental component of the Onion Ring Model refers to the context in which e-development projects and information systems exist. This context is made up of a variety of factors, such as legal restrictions, cultural influences, economic and infrastructural constraints, and, perhaps most importantly, political factors.

2.2.4 Information System User Satisfaction Model

While developing, organizing, and executing a technological development project, it is crucial to take into account these contextual elements in addition to institutional ones like organizations, groups, and markets. It is essential to consider these contextual factors, as well as institutional factors such as organizations, groups, and markets when proposing, planning, and implementing an e-development project. Output variables are defined by (Mettam GR, 1999) as the results or repercussions of the installation of new information management. There are wide-ranging consequences and impacts on various aspects, such as the economy, organizations, society, and management, and can be analysed at different levels, including macro, sectoral, firm-specific, application-specific, and stakeholder-specific levels.

Due to its critical role in determining the influence of information systems on many aspects, the research on information system success has attracted a lot of interest. The effects on utilization and performance are the main indicators of an information system's success, (DeLone, 2003). However, researchers have also focused on studying the factors that lead to information system success, such as appropriateness, individual characteristics, and trust. Researchers are interested in these antecedents to comprehend the variables that affect the success of information systems. Earlier research has investigated how effective the concept of "fit" is in predicting system usage and concluded that the various dimensions of fit may not always be consistent. To measure fit, researchers have conventionally used the six dimensions that were proposed by (Goodhue, 1995): quality, locatability, authorization, compatibility, system reliability, and simplicity of use. Nonetheless, (Strong, 2006) revealed that the utilization of technology is significantly impacted by computer self-efficacy, which is influenced by the specific characteristics of the technology that is being investigated.

Goodhue conducted an independent study in the year 2000, where they replaced task-technology fit with user evaluation and adapted individual characteristics such as computer literacy, to fit with the specific technology. (Pendharkar, 2001) employed

(Goodhue, 1995) model to investigate user evaluations of health information technology in the healthcare sector. However, they utilized only two limited items- prior information technology education and job orientation requirement- to measure individual characteristics, rather than computer literacy.

(Sun, 2006) propose that individual characteristics, such as prior knowledge, experience, and intellectual capabilities, may exert a significant impact on usage, as an alternative viewpoint. Although the updated DeLone and McLean model has asserted that service quality, system quality, and information quality are the three key determinants of user satisfaction with information systems, limited research has examined all three aspects of user satisfaction. Most research has focused on individual dimensions, such as system quality or information quality, rather than considering the combined effects of all three. However, some recent studies have attempted to address this gap in the literature. Numerous research studies have focused on e-governance and its effects on small businesses as well as user contentment with electronic government services.

2.3 Empirical Review

(Bowale, 2014) undertook a research study in Lagos, Nigeria to evaluate the traits of small businesses and determine the factors that affect their ability to generate employment opportunities. In their 2014 study, Bowale and Ilesanmi used questionnaires to gather primary data from a sample of 180 small companies in Lagos, Nigeria. The goal of this study was to pinpoint the determinants that impact the ability of small businesses to generate jobs. According to the findings, various factors such as business registration, company size, nature of business, and capital sources have a significant impact on the income and job creation potential of SMEs. The study found that the capacity of SMEs to create jobs was only significantly influenced by the age of the business, education, and raw material sources. It's important to note that the study conducted by (Bowale, 2014) focused on the characteristics of small businesses and the factors that impact their ability to create jobs in Lagos, Nigeria. This study is relevant to the broader topic of e-governance, as it has important implications for how electronic government services can support small business growth and development. However, the study did not directly investigate user satisfaction with electronic government services.

The research (Uchenna, 2020) examined how the features of e-service quality influence user satisfaction with electronic government service portals in the South-East region of Nigeria. The study revealed a strong positive correlation between these variables. The research identified several key determinants that impact customer satisfaction with electronic government services. These include e-security, e-trustworthiness, ease of use, website quality reliability, quality responsiveness, benefits, and hurdles. In contrast, (Okunola, 2015) examined users' experience with e-governance services offered by Nigeria's immigration department and found that the participants were dissatisfied with the services. The study identified security, assistance, dependability, and data protection as major areas of concern for the users.

(Paul, 2007) conducted a study that delved into the connection between successful e-governance and elements of good governance, such as social integration, participation, transparency, accountability, public financial management reform, and development. (Rajon, 2008) conducted a comparative analysis of the existing governmental framework in Bangladesh and explored the possibility of implementing e-governance. They particularly focused on the potential of e-governance to reduce corruption in various areas of governance.

(Alam, 2011.)conducted a study that examined the obstacles involved in establishing e-governance in Bangladesh, with a specific emphasis on the administrative sector. Alam and colleagues investigated the difficulties associated with implementing e-governance in developing nations, such as Bangladesh. Their research pinpointed two major hurdles: inadequate infrastructure and inadequate ICT policies. They proposed that public-private partnerships could help address these challenges. In 2008, (Gonçalves, 2008) explored the organizational factors that may contribute to the suboptimal implementation of e-governance systems. They also examined the technological obstacles that surface when deploying interoperability and legacy systems. (Choudrie, 2009) focused on describing the usability issues of state government web portals in selected developing countries, with a focus on user perspectives. The research found that users generally had positive views about the navigation, layout, text, and colours of electronic government web portals, but the help and FAQ features were considered inadequate. In summary, these studies demonstrate that e-governance has a substantial impact on small businesses and user satisfaction with electronic government services and that implementing e-governance comes with various challenges from both technical and organizational standpoints.

3 Research Methodology

This section will focus on the research method and approach that will be used for the study. It discusses the research design, sampling technique, data collection method, technique, method of data analysis, and ethical issues

3.1 Research Design

The research will use a descriptive survey approach. It involves asking study participants for information through a questionnaire. It is often used in research because of its advantage of efficiency and low cost. The questionnaire is designed such that the participant is able and can conveniently express their opinion on the subject. The collected data are thereafter analysed and used to provide answers to the questions raised in the course of the study.

3.2 Sampling Methods/Techniques Sampling Methods/Techniques

The population of the study is those who have used the CAC portal to register their business. A Snowball sampling technique will be used to select the participant for the study. Snowball sampling is a nonprobability sampling method where new units are recruited by other units to form part of the sample. Snowball sampling can be a useful way to research people with specific traits who might otherwise be difficult to identify. This is a sampling technique, in which existing subjects provide referrals to recruit samples required for a research study.

3.3 Data Collection Methods/Techniques

To achieve the objectives of the study, an online questionnaire will be used to collect responses from the participants. Citizens that have used the CAC platform to register their business names and businesses will form the main participant in the study. This is appropriate because they would be able to provide the needed data for the analysis. The

questionnaire will be divided into two sections. The first section will contain pertinent data about the participant demographic information while the second section will focus on general information about experience in using the CAC portal and the whole business registration process.

3.4 Data Recording/Transformation/Analysis Methods/Techniques

The research instrument will be sent for validation. The objective of the validation is to ascertain the ability of the instrument to measure what is designed to measure. The questionnaire will also be subjected to a Cronbach alpha reliability test to determine the internal consistency.

(Cronbach, 1951) introduced a statistical measure of internal consistency reliability, which is useful to evaluate the accuracy of scales and measurements that are intended to gauge a single construct or idea Higher values of the alpha coefficient denote more internal consistency dependability and range from 0 to 1. No reliability is indicated by a value of 0, and perfect reliability is shown by a value of 1. The correlation between every pair of items on a scale is measured, and the average of those correlations is used to calculate Cronbach's alpha. This gives a rough idea of how accurately the scale's elements are measuring the same construct. Generally, values above 0.7 are considered reliable.

The collected data will be subjected to further data analysis using Excel. To test hypotheses, appropriate statistical techniques like chi-square analysis will be carried out on the collection to determine the relationship that exists between variables.

The chi-square test of reliability is a statistical test used to evaluate the dependability of a measurement tool or scale. The test will analyse the correlation between actual and predicted response frequencies to a collection of items or questions. This test will contrast the actual frequency distribution of the responses to collected data with a hypothetical or ideal frequency distribution. Chi-square is a useful tool because it figures out whether survey results can be generalized since it can determine the homogeneity or consistency of a questionnaire or survey. To test this research hypothesis, the data collected will be analysed using the Chi-square test of reliability.

4 Data Presentation, Analysis, and Interpretation.

4.1 Preamble

This section reveals the result of the analysis of data retrieved from the respondents through the research instrument administered to the sample of the study. The approved questionnaire was used to develop the online survey on Google form which consisted of three sections namely; the introduction, the demographic section, and the general section made up of items on the Role of CAC as an organizational body, the Role of the CAC portal, Usability challenges, Process challenges, and citizens' satisfaction with CAC service delivery. The researcher administered the questionnaire to the participants online and a total of 78 copies were retrieved from the online survey.

4.2 Demographic Data

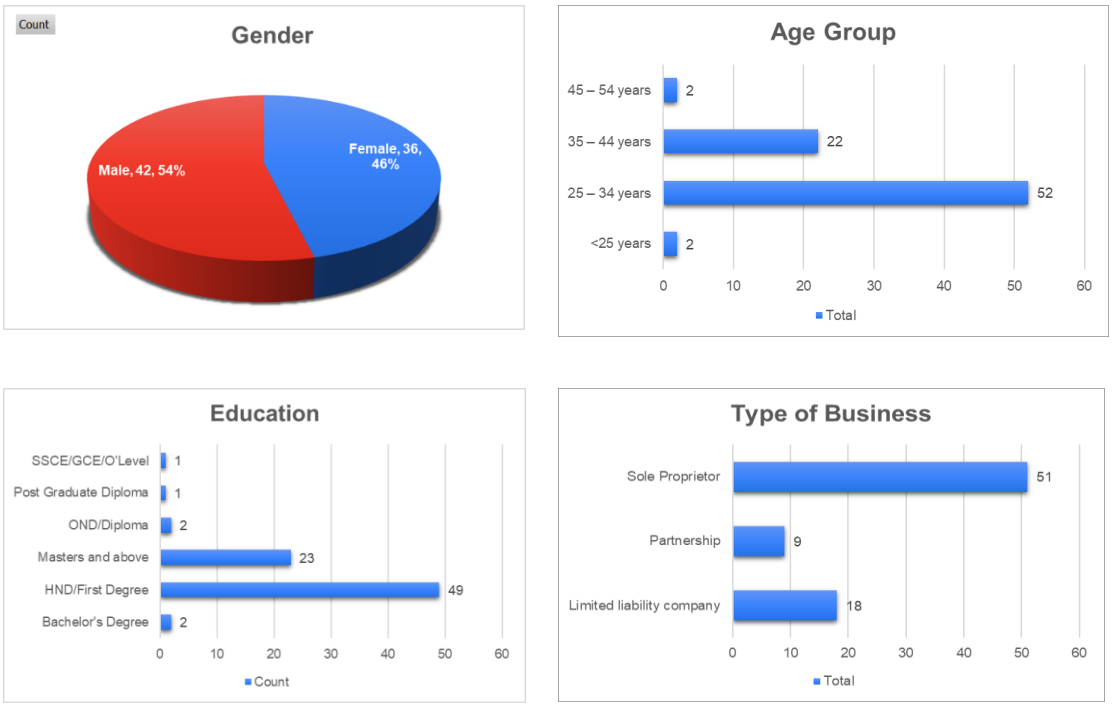

Figure 2 Graphical Representation of Demographic Data

Variables	Frequency	Percentages
Sex	N	(%)
Male	42	53.8
Female	36	46.2
Total	78	100
Age Group	N	(%)
< 25 years	2	2.6
25 – 34 years	52	66.7
35 – 44 years	22	28.2
45 -54 years	2	2.6
Total	78	100
Education	N	(%)
SSCE/GCE/O'LEVEL	1	1.3
OND/ Diploma	2	2.6
HND/ First Degree	49	62.8
BSC	2	2.6
Masters	23	29.5
Post Graduate Diploma	1	1.3
Total	78	100
Type of Business	N	(%)
Sole Proprietor	51	65.4
Partnership	9	11.5
Limited liability company	18	23.1
Total	78	100

Table 1 Demographic Data and Percentages

The result in Table 1 shows the demographic data of the participants in the survey. It reveals that 42 (53.8%) of the participants are male, while 36(46.2%) are female. This implies that there are more male than female participants in the study. The Table reveals that 2(2.6%) participants are less than 25 years, 52(66.7%) participants are within the age bracket of 25-34 years, 22(28.2%) participants are within the age bracket of 35 – 44 years, and 2(2.6%) participants are within 45– 54 years. Also, the table reveals that 1(1.3%) participants are SSCE or GCE or O'Level holders, 2(2.6%) participants are OND or Diploma holders, 49(62.8%) participants are HND or first-degree holders, 2(2.6%)

participants are BSc holders, 23(29.5%) participants are Masters and above holders, and 1(1.3%) participants have Post Graduate Diploma. 65.4% of participants have sole proprietorship businesses, 11.5% run a partnership business and 23.1% run limited liability companies.

4.3 Data Analysis and Presentation of the Main Questions

Role of CAC as an organizational body

s/n	Items	SD	D	N	A	SA	Total
1	It is used for business organization administration and dissolution	4	5	9	44	16	78
		5.1%	6.4%	11.5%	56.4%	20.5%	100
2	To create and maintain business registrations and offices across the federation for which it is responsible.	5	2	7	41	23	78
		6.4%	2.6%	9.0%	52.6%	29.5%	100
3	Establish and maintain a system for the oversight and control of the company or the business formation	4	5	13	41	15	78
		5.1%	6.4%	16.7%	52.6%	19.2%	100

Table 2 Role of CAC as an organizational body

The result in Table 2 shows the frequency and percentages of the participant's responses on the Roles of CAC as an organizational body. On the item "It is used for business organization administration and dissolution", 4(5.1%) respondents indicated strongly disagree, 5(6.4%) respondents indicated disagree, 9(11.5%) respondents indicated neutral 44(56.4%) respondents indicated agreed, and 16(20.05%) respondents indicated strongly agree. On the item, "To create and maintain business registrations and offices across the federation for which it is responsible", 5(6.4%) respondents indicated strongly disagree, 2(2.6%) respondents indicated disagree, 7 (9.0%) respondents indicated neutral, 41(52.6%) respondents indicated agreed, 23(29.5%) respondents indicated strongly agree". On the item "Establish and maintain a system for the oversight and control of the

company or the business formation", 4(5.1%) respondents indicated strongly disagree, 5(6.4%) respondents indicated disagree, 13(16.7%) respondents indicated strongly, 41(52.6%) respondents indicated agree, and 15(19.2%) respondents indicated strongly agree.

Role of the CAC Portal

s/n	Items	SD	D	N	A	SA	Total
4	It is used for creating an account and registering a business name.	3	-	4	39	32	78
		3.8%	-	5.1%	50%	41.0%	100
5	It can be used to reserve a business name	3	-	8	35	32	78
		3.8%	-	10.3%	44.9%	41.0%	100
6	It can be used to make payments for a business name	3	6	16	35	18	78
		3.8%	7.7%	20.5%	44.9%	23.1%	100

Table 3 Role of the CAC Portal

The result in Table 3 shows the frequency and percentages of the participant's responses on the Roles of CAC as an organizational body. On the item "It is used for creating an account and registering business name", 3(3.8%) respondents indicated strongly disagree, 4(5.1%) respondents indicated neutral 39(50.1%) respondents indicated agreed, and 32(41.0%) respondents indicated strongly agree. On the item, "It can be used to reserve a business name", 3(3.8%) respondents indicated strongly disagree, 8(10.3%) respondents indicated neutral, 35(44.9%) respondents indicated agreed, 32(41.0%) respondents indicated "strongly agree". On the item "It can be used to make payment for a business name", 3(3.8%) respondents indicated strongly disagree, 6(7.7%) respondents indicated disagree, 16(20.5%) respondents indicated neutral, 35(44.9%) respondents indicated agree, and 18(23.1%) respondents indicated strongly agree.

Usability challenges

s/n	Items	SD	D	N	A	SA	Total
7	The categorization of CAC portal information and functions is reasonable, you can	3	12	20	38	5	78
		3.8%	15.4%	25.6%	48.7%	6.4%	100

	quickly find the information and services you need.						
8	Images, videos, and hyperlinks of the CAC portal are displayed properly	2	13	30	30	3	78
		2.6%	16.7%	38.5%	38.5%	3.8%	100
9	The guidance and instructions on the CAC portal are clear, easy to understand, and operate	6	12	18	38	4	78
		7.7%	15.4%	23.1%	48.7%	5.1%	100
10	The CAC portal has real-time communication channels, such as online customer service.	10	22	23	17	6	78
		12.8%	28.2%	29.5%	21.8%	7.7%	100
11	The CAC portal online service or email system, message boards, and other channels can reply to me in time and answer my questions and comments.	15	21	22	17	3	78
		19.2%	26.9%	28.2%	21.8%	3.8%	100
12	Online payments can be completed within a specified time.	4	13	27	28	6	78
		5.1%	16.7%	34.6%	35.9%	7.7%	100
13	The content and performance of the CAC portal will not be affected by using different browsers or Internet tools to open the portal.	5	12	26	31	4	78
		6.4%	15.4%	33.3%	39.7%	5.1%	100

Table 4 Usability Challenges

The result in Table 4 shows the frequency and percentages of the participants' responses to usability challenges. On the item "The categorization of CAC portal information and functions is reasonable, you can quickly find the information and services you need", 3(3.8%) respondents indicated strongly disagree, 12(15.4%) respondents indicated disagree, 20(25.6%) respondents indicated neutral 38(48.7%) respondents indicated agreed, and 5(6.4%) respondents indicated strongly agree. On the item, "Images, videos, and hyperlinks of the CAC portal are displayed properly", 2(2.6%) respondents indicated

strongly disagree, 13(16.7%) respondents indicated disagree, 30(38.5%) respondents indicated neutral, 30(38.5%) respondents indicated agreed, 23(29.5%) respondents indicated strongly agree. On the item "The guidance and instructions on the CAC portal are clear, easy to understand, and operate", 6(7.7%) respondents indicated strongly disagree, 12(15.4%) respondents indicated disagree, 18(23.1%) respondents indicated strongly, 38(48.7%) respondents indicated agree, and 4(5.1%) respondents indicated strongly agree.

Also, on the item "The CAC portal has real-time communication channels, such as online customer service", 10(12.8%) respondents indicated strongly disagree, 22(28.2%) respondents indicated disagree, 23(29.5%) respondents indicated neutral, 17(21.8%) respondents indicated agreed, and 3(3.8%) respondents indicated strongly agree". On the item, "The CAC portal online service or email system, message boards, and other channels can reply to me in time and answer my questions and comments", 15(19.2%) respondents indicated strongly disagree, 21(26.9%) respondents indicated disagree, 22(28.2%) respondents indicated neutral, 17(21.8%) respondents indicated agreed, 3(3.8%) respondents indicated strongly agree. On the item "Online payments can be completed within a specified time", 4(5.1%) respondents indicated strongly disagree, 13(16.7%) respondents indicated disagree, 27(34.6%) respondents indicated neutral, 28(35.9%) respondents indicated agreed, 6(7.7%) respondents indicated strongly agree. On the item "The content and performance of the CAC portal will not be affected by using different browsers or Internet tools to open the portal", 5(6.4%) respondents indicated strongly disagree, 12(15.4%) respondents indicated disagree, 26(33.3%) respondents indicated strongly, 31(39.7%) respondents indicated agree, and 4(5.1%) respondents indicated strongly agree.

Process Challenges

s/n	Items	SD	D	N	A	SA	Total
14	The CAC portal has users' privacy protection settings, such as password authentication and mobile authentication	2	10	27	31	8	78
		2.6%	12.8%	34.6%	39.7%	10.3%	100
15	The CAC portal will protect users' privacy; I don't have to worry about	4	12	31	23	8	78
		5.1%	15.4%	39.7%	29.5%	10.3%	100

	personal information being leaked						
16	There is no need to visit the CAC physical office because all registration processes are completed online.	9	22	17	21	9	78
		11.5%	28.2%	21.8%	26.9%	11.5%	100
17	I don't need an agent's help to complete registration because it's an easy process.	15	25	14	16	8	78
		19.2%	32.1%	17.9%	20.5%	10.3%	100
18	There are rarely system failures when registering online	15	32	20	11	-	78
		19.2%	26.9%	28.2%	21.8%	-	100

Table 5 Process Challenges

The result in Table 5 shows the frequency and percentages of the participants' responses to process challenges. On the item "The CAC portal has users' privacy protection settings, such as password authentication and mobile authentication", 2(2.6%) respondents indicated strongly disagree, 10(12.8%) respondents indicated disagree, 27(34.6%) respondents indicated neutral 31(39.7%) respondents indicated agreed, and 8(10.3%) respondents indicated strongly agree. On the item, "The CAC portal will protect users' privacy; I don't have to worry about personal information being leaked", 4(5.1%) respondents indicated strongly disagree, 12(15.4%) respondents indicated disagree, 31(39.7%) respondents indicated neutral, 23(29.5%) respondents indicated agreed, 8(10.3%) respondents indicated strongly agree. On the item "There is no need to visit the CAC physical office because all registration processes are completed online.", 9(11.5%) respondents indicated strongly disagree, 22(28.2%) respondents indicated disagree, 17(21.8%) respondents indicated strongly, 21(26.9%) respondents indicated agree, and 9(11.5%) respondents indicated strongly agree.

Also, on the item "I don't need an agent's help to complete registration because it's an easy process.", 15(19.2%) respondents indicated strongly disagree, 25(32.1%) respondents indicated disagree, 14(17.9%) respondents indicated neutral, 16(20.5%) respondents indicated agreed, and 8(10.3%) respondents indicated strongly agree. On the item, "There are rarely system failures when registering online", 15(19.2%) respondents

indicated strongly disagree, 32(26.9%) respondents indicated disagree, 20(28.2%) respondents indicated neutral, and 11(21.8%) respondents indicated agreed.

Citizen's satisfaction with CAC service delivery

s/n	Items	SD	D	N	A	SA	Total
19	The function of the CAC portal is comprehensive and the process of the CAC portal system is simple	8	21	19	23	7	78
		10.3%	26.9%	24.4%	29.5%	9.0%	100
20	My registered business name is protected	2	2	18	45	11	78
		2.6%	2.6%	23.1%	57.7%	14.1%	100
21	The CAC portal system can improve the efficiency of government services, and accelerate the pace of business.	3	7	20	39	9	78
		3.8%	9.0%	25.6%	50.0%	11.5%	100
22	Information and services provided by the CAC portal system can meet my business needs	5	12	22	35	4	78
		6.4%	15.4%	28.2%	44.9%	5.1%	100
23	Government staffs of offline services are professional and enthusiastic	6	25	31	15	1	78
		7.7%	32.1%	39.7%	19.2%	1.3%	100
24	The CAC portal will take the initiative to inform me of new information or services according to records	7	17	27	23	4	78
		9.0%	21.8%	34.6%	29.5%	5.1%	100
25	On the basis of meeting the general requirements, the CAC portal also provides personalized customer services for different users.	8	21	28	19	2	78
		10.3%	26.9%	35.9%	24.4%	2.6%	100

Table 6 Citizen's Satisfaction with CAC service delivery

The result in Table 4.6 shows the frequency and percentages of the participants' responses on Citizen's satisfaction with CAC service delivery. On the item "The function of the

CAC portal is comprehensive and the process of the CAC portal system is simple", 8(10.3%) respondents indicated strongly disagree, 21(26.9%) respondents indicated disagree, 19(24.4%) respondents indicated neutral 23(29.5%) respondents indicated agreed, and 7(9.0%) respondents indicated strongly agree. On the item, "My registered business name is protected", 2(2.6%) respondents indicated strongly disagree, 2(2.6%) respondents indicated disagree, 18(23.1%) respondents indicated neutral, 45(57.7%) respondents indicated agreed, 11(14.1%) respondents indicated strongly agree. On the item "The CAC portal system can improve the efficiency of government services, and accelerate the pace of business.", 3(3.8%) respondents indicated strongly disagree, 7(9.0%) respondents indicated disagree, 20(25.6%) respondents indicated strongly, 39(50.0%) respondents indicated agree, and 9(11.5%) respondents indicated strongly agree.

Also, on the item "Information and services provided by the CAC portal system can meet my business needs", 5(6.4%) respondents indicated strongly disagree, 12(15.4%) respondents indicated disagree, 22(28.2%) respondents indicated neutral 35(44.9%) respondents indicated agreed, and 4(5.1%) respondents indicated strongly agree. On the item, "Government staffs of offline services are professional and enthusiastic", 6(7.7%) respondents indicated strongly disagree, 25(32.1%) respondents indicated disagree, 31(39.7%) respondents indicated neutral, 15(19.2%) respondents indicated agreed, 1(1.3%) respondents indicated strongly agree. On the item "The CAC portal will take the initiative to inform me of new information or services according to records", 7(9.0%) respondents indicated strongly disagree, 17(21.8%) respondents indicated disagree, 27(34.6%) respondents indicated strongly, 23(29.5%) respondents indicated agree, and 4(5.1%) respondents indicated strongly agree. On the item "On the basis of meeting the general requirements, the CAC portal also provides personalized customer services for different users", 8(10.3%) respondents indicated strongly disagree, 21(26.9%) respondents indicated disagree, 28(35.9%) respondents indicated strongly, 19(24.4%) respondents indicated agree, and 2(2.6%) respondents indicated strongly agree.

4.4 Reliability and Validity Test Results

The internal consistency is confirmed by calculating Cronbach's alpha to test the instrument's accuracy and reliability. The adequate threshold value for Cronbach's alpha is that it should be > 0.7.

Variables	No of Items	Cronbach's alpha Value
Role of CAC as an organizational body	3	0.753
Role of the CAC portal	3	0.691
Usability challenges	7	0.798
Process challenges	5	0.699
Citizen's satisfaction with CAC service delivery	7	0.819
Overall	25	0.901

Table 7 Cronbach's alpha Test Results

In Table 7, the variables; Role of CAC as an organizational body, Role of the CAC portal, Usability challenges, Process challenges, and Citizen's satisfaction with CAC service delivery have **Cronbach's alpha values 0.753, 0.691, 0.798, 0.699, and 0.819 respectively with 0.901 total**. This confirms the reliability of the survey instrument. The Cronbach's alpha coefficient for the factors with total scale reliability is 0.901, which is above > 0.7. It shows that the variables exhibit a correlation with their component grouping and thus they are internally consistent.

4.5 Test of Hypothesis

To test the research hypotheses, the data collected were analyzed using the Chi-square test to determine if there are any significant associations between selected variables.

In chi-square analysis, Degrees of freedom (df) is the number of categories minus one. The categories can be rows, columns, or cells in a contingency table. The degree of freedom ascertains the critical value, which helps to determine the probability of obtaining a certain result by chance. This means that it determines how much variation is allowed in the data to support the null hypothesis. It is a crucial idea in regression analysis and hypothesis testing, and it is represented by the symbol 'df'.

The null hypothesis often assumes that there is no difference between the groups or variables under consideration. P value is used to calculate the probability of getting a result as extreme or more extreme than the derived result, supposing that the null hypothesis is true. P value should be **> 0.05** otherwise we reject the null hypothesis.

Hypothesis 1

Ho_1: There is no significant association between the usability challenges of the CAC portal and educational qualification.

Educational Qualification	Usability Challenges					Total
	Agree	Disagree	Neutral	Strongly Agree	Strongly Disagree	
Bachelor's Degree	1				1	**2**
	50.0%	0.0%	0.0%	0.0%	50.0%	100.0%
HND/First Degree	27	5	13	2	2	**49**
	55%	10%	27%	4%	4%	100%
Masters and above	8	7	6	2		**23**
	34.8%	30.4%	26.1%	8.7%	0.0%	100.0%
OND/Diploma			1	1		**2**
	0%	0%	50%	50%	0%	100%
Post Graduate Diploma	1					**1**
	100.0%	0.0%	0.0%	0.0%	0.0%	100.0%
SSCE/GCE/O'Level	1					**1**
	100.0%	0.0%	0.0%	0.0%	0.0%	100.0%
Grand Total	**38**	**12**	**20**	**5**	**3**	**78**
	48.7%	15.4%	25.6%	6.4%	3.8%	100.0%

Figure 3 Cross Tabulation of Usability Challenges and Educational Qualification

Figure 3 shows the cross-tabulation of variables that were used to run the chi-square test on Excel. **The derived Chi-square value on Excel is 28.95986317 and the degree of freedom is 20 with a P value of 0.0885526753**. The P value is greater than 0.05 so we accept the null hypothesis and conclude that there is no significant association between usability challenges and educational qualification.

By extension, the result implies that the usability challenges experienced by users while using or navigating the CAC portal are independent of the user's level of education.

Hypothesis 2

Ho_2: There is no significant association between the process challenges of the CAC portal and age group.

Age Groups	Process Challenges of the CAC Portal					Total
	Agree	Disagree	Neutral	Strongly Agree	Strongly Disagree	
<25 years	1		1			**2**
	50.0%	0.0%	50.0%	0.0%	0.0%	100.0%
25 – 34 years	21	6	17	6	2	**52**
	40.4%	11.5%	32.7%	11.5%	3.8%	100.0%
35 – 44 years	9	3	8	2		**22**
	40.9%	13.6%	36.4%	9.1%	0.0%	100.0%
45 – 54 years		1	1			**2**
	0%	50%	50%	0%	0%	100%
Grand Total	**31**	**10**	**27**	**8**	**2**	**78**
	39.7%	12.8%	34.6%	10.3%	2.6%	100.0%

Figure 4 Cross Tabulation of Process Challenges of The CAC Portal and Age Group.

Figure 4 shows the cross-tabulation of variables that were used to run the chi-square test on Excel. **The derived Chi-square value on Excel is 5.222825024 and the degree of freedom is 12 with a P value of 0.950119156474**. The P value is greater than 0.05 hence we fail to reject the null hypothesis and conclude that there is no significant association between process challenges and age. The result implies that the process challenges experienced in the course of registering a business are independent of a person's age group.

Hypothesis 3

H_{O3}: There is no significant association between user satisfaction with the CAC portal and Type of business.

Type of Business	User Satisfaction of the CAC Portal					Total
	Agree	Disagree	Neutral	Strongly Agree	Strongly Disagree	
Limited liability company	5	7	5	1		18
	27.8%	38.9%	27.8%	5.6%	0.0%	100.0%
Partnership	3	1	1	2	2	9
	33.3%	11.1%	11.1%	22.2%	22.2%	100.0%
Sole Proprietor	15	13	13	4	6	51
	29.4%	25.5%	25.5%	7.8%	11.8%	100.0%
Grand Total	23	21	19	7	8	78
	29.5%	26.9%	24.4%	9.0%	10.3%	100.0%

Figure 5 Cross-Tabulation of User Satisfaction of the CAC Portal and Type of Business.

Figure 5 shows the cross-tabulation of variables that were used to run the chi-square test on Excel. **The derived Chi-square value on Excel is 7.93954195 and the degree of freedom is 8 with a P value of 0.4393980704496**. The P value is greater than 0.05 hence we fail to reject the null hypothesis and conclude that there is no significant association between user satisfaction of the CAC portal and the type of business. The finding implies that user satisfaction with the CAC portal is not dependent on the type of business. In other words, whether a business is a sole proprietor, partnership, or limited liability company, it does not influence user satisfaction as they have similar levels of satisfaction with the CAC portal.

Hypothesis 4

H_{O4}: There is no significant association between usability challenges and user satisfaction with the CAC Portal.

	Usability Challenges	User Satisfaction	Total
Agree	38	23	61
	62%	38%	100%
Disagree	12	21	33
	36%	64%	100%
Neutral	20	19	39
	51%	49%	64%
Strongly Agree	5	7	12
	42%	58%	100%
Strongly Disagree	3	8	11
	27%	73%	100%
TOTAL	78	78	**156**
	50%	50%	100%

Figure 6 Tabulation of Usability Challenges and User Satisfaction of the CAC Portal

Figure 6 shows the cross-tabulation of variables that were used to run the chi-square test on Excel. **The derived Chi-square value on Excel is 8.774771676 and the degree of freedom is 4 with a P value of 0.066982387**. The P value is greater than 0.05, so we fail to reject the null hypothesis and conclude that there is no significant association between usability challenges and user satisfaction. The finding implies that user satisfaction with the CAC portal is not dependent on the usability challenges that users face when they interface with the CAC portal.

Hypothesis 5

Ho_5: There is no significant association between the process challenges of the CAC portal and user satisfaction.

	Process Challenges	User Satisfaction	Total
Agree	31	23	54
	57%	43%	100%
Disagree	10	21	31
	32%	68%	100%
Neutral	27	19	46
	59%	41%	100%
Strongly Agree	8	7	15
	53%	47%	100%
Strongly Disagree	2	8	10
	20%	80%	100%
TOTAL	78	78	**156**

Figure 7 Tabulation of Process Challenges and User Satisfaction of the CAC portal.

Figure 7 shows the cross-tabulation of variables that were used to run the chi-square test on Excel. **The derived Chi-square value on Excel is 10.14638201 and the degree of freedom is 4 with a P value of 0.038032781**. The P value is less than 0.05, so we reject the null hypothesis and conclude that there is a significant association between the process challenges of the CAC portal and user satisfaction.

The Values shown in Figure 3 - Figure 7 above, can be referred to as the observed values. Observed Values are the exact values derived from the cross-tabulation of variables in Excel. The Expected values were derived by multiplying the Row total by the column total and dividing by the overall total.

A Chi-square value was derived afterward on Excel with a degree of freedom value and probability value. The degree of freedom is calculated by using the formula below.

Df = (Number of rows-1) x (Number of Colums-1).

More discussions and conclusions will be highlighted in the following chapter.

Note: Link to analysis documents are also available on request.

5 Discussion of Findings, Summary, and Recommendations

5.1 Preamble

This section presents the discussion of findings, recommendations, and contributions to the knowledge. The chapter was discussed in the following sub-heading, summary, conclusion, recommendations, contribution to knowledge, and suggestions for further Study.

5.2 Discussion of Findings

The following are the findings of the study:

The result of research hypothesis one shows that there is no association between the usability challenges of the CAC portal and educational qualification. It means that the usability challenges faced by users of the CAC portal are not significantly influenced by their educational qualifications. In further explanation, regardless of the educational qualifications of the respondents, they face similar usability challenges while using the CAC portal. This indicates that the challenges are more related to either the design of the portal or the registration process, rather than the users' education level.

The result of hypothesis two shows that there is no significant association between the process challenges of the CAC portal and age group. It simply means that the process challenges faced by users of the CAC portal are not significantly influenced by their age group. Participants face similar registration process challenges regardless of their age. This implies that the challenges are more related to either the design of the portal or the registration process, rather than the users' age.

The result of hypothesis three shows that there is no significant association between user satisfaction with the CAC portal and types of business. it means that the type of business a user is engaged in does not significantly influence their satisfaction with the CAC portal. In other words, users registering different types of businesses have similar levels of

satisfaction with the CAC portal. This could indicate that the features and functionality provided by the portal are relevant and useful for a variety of businesses, regardless of their industry or sector.

The result of hypothesis four shows that there is no significant association between usability challenges and user satisfaction. The finding implies that user satisfaction with the CAC portal is not dependent on the usability challenges that users face when they interface with the CAC portal.

It is gathered that the CAC portal is fair enough regardless of the challenges, as this is the avenue set by the Nigerian government for business registration. There seems to be a final achievement of the original goal of a registered business, which is not affected by the challenges encountered during the registration process. Since the portal was able to collect all data required and processed them for the accurate registration of the business and its owner, there is a measure of satisfaction. Satisfaction in this sense comes from the citizen's ability to have successfully registered a business in the end.

In conclusion, it is safe to say that citizens utilized the portal for the main purpose of registering their businesses regardless of the usability challenges faced.

The result of hypothesis five shows that there is a significant association between the process challenges of the CAC portal and user satisfaction. This means that the process challenges faced by users significantly influence their satisfaction. In essence, when users encounter challenges related to the business registration process facilitated by the CAC commission and the portal, then they are likely to have a lower level of satisfaction. On the other hand, if the Commission effectively and proactively provides a seamless process for business registration through the portal, Citizens are more likely to have a higher level of satisfaction with the portal and business registration process as a whole in Nigeria.

Process challenges go a long way to determining the satisfaction level of Citizens. Following the questions asked and the results from this study, it can be said that system failures pose one of the causes of process challenges. As much as the Nigerian government has put efforts into automating the business registration service, more effort is required to ensure that quality IT infrastructures including reliable internet are upgraded and maintained to prevent unnecessary system failures.

Due to the cumbersome nature of the business registration process, it is also gathered that the majority of people have received assistance from agents and government officials to fully finish their registrations. When registration procedures are not adequately explained on portals with sufficient information on the steps needed for registration, this encourages citizens to seek further assistance from a third party and boosts visits to government offices.

5.3 Summary and Conclusion

Currently, developing countries especially Nigeria, are directing their efforts toward pursuing e-government and digitizing service delivery. While this is good, it is important to note that the existence of successful e-government schemes starts with the citizens and ensures their satisfaction in the end.

Delivering government services to citizens via a digital network e.g. web portals improves efficiency and transparency in the public sector; however, if the web portals do not fully provide adequate information on registration steps/requirements; this can lead to challenges that reduce Citizens satisfaction. This would also defeat the original purpose of delivering efficient services through the use of IT.

The study was conducted to investigate citizens' perceptions of the business registration process through Nigeria's Cooperate Affairs Commission (CAC) service portal.

Research objectives, questions, and hypotheses were formulated to guide the study. A descriptive research survey was adopted in the study as the research method. The researcher adopted a snowball sampling technique for selecting the participants. A questionnaire was designed and adopted to obtain necessary information concerning the subject. The items collected were analyzed using the Chi-square Test of association. Findings from the test of hypotheses were discussed and summarized.

This study produced comprehensive descriptive statistics that have provided valuable information on how Nigeria's Cooperate Affairs Commission (CAC) portal is perceived by its users for business registration.

Results from the study have shown that regardless of respondents' age group, similar process challenges are faced while using the CAC portal. Also, regardless of the

educational qualifications of the respondents, similar usability challenges have been faced while using the CAC portal. This is quite interesting because one would generally assume that educational qualification gives an IT literacy edge as one can use IT products and navigate web platforms without challenges - this could be the same for age groups. However, when respondents all have the same experience and perception regardless of educational level or age, then it suggests that issues might be on the supply side.

Because the usability challenges faced by CAC portal users were not significantly influenced by their educational qualifications, nor were process challenges influenced by age group, it appears that the challenges are related to the service process and the portal rather than the users' educational level or age.

Also, the type of business a user is engaged in does not significantly influence their satisfaction with the CAC portal.

The Nigerian Government's objective should be to improve the relationship between the government and the populace so that services may be delivered directly, effectively, and seamlessly without the use of intermediaries. Streamline processes such that they are simple and clear enough for all tribes.

Lastly, the business registration service must be designed in a way that not only allows users to get detailed easy-to-understand requirements for business registration but also gets uninterrupted system failures when registering. Access to quick help/support when stuck in any registration step also helps to reduce process challenges.

All of this will go a long way to improve Citizens' satisfaction and their perception of the CAC service delivery in Nigeria.

5.4 Recommendations

Based on the findings, the following recommendations are proposed:

1. **Conduct User Research:** Conduct user research to identify the usability and process challenges faced by users when accessing the portal. This can include usability testing, surveys, and focus groups to get feedback on what specific issues users encounter which influence their decision to use agents.

2. **Simplify Processes:** Review the business processes facilitated by the CAC portal to identify any areas that can be simplified or streamlined. Provide clear and concise instructions for each step of the process and make it easy for users to understand the required registration documents and information they need to complete registrations with minimal paid help.
3. **Improve and encourage Self-Service:** Self-service should be encouraged amongst users. This can be achieved by providing well-outlined information on required registration documents and registration steps on the portal. This way, citizens have all the information they need to do their registrations with fewer office visits and help from agents**.**
4. **Enhance User Support**: Provide user support services, such as a help desk or live chat, to assist users in the three major languages in Nigeria, who may encounter challenges while using the CAC portal. This will help to improve user satisfaction by providing quick and effective support to users in their local language.
5. **Increase Accessibility**: Ensure the CAC portal is accessible to all users, regardless of their abilities or disabilities. This can include making the portal compatible with assistive technologies, providing alternative text for images, and ensuring that the portal meets accessibility standards.
6. **IT Infrastructures**: System failures that cause tiring registration processes can be reduced by providing adequate and well-maintained IT infrastructures including internet, hardware, and software

6 Contribution to Knowledge, Limitations of the Study, and Suggestions for Further Studies

6.1 Contribution to Knowledge

This study has contributed to knowledge in the following ways;

The study has helped to inform government service providers, developers of the CAC portal, and organizers of the business registration service on challenges people face interacting with their portal and made useful recommendations to improve accessibility, enhance user support and improve better processes for wider citizen satisfaction.

The study uses a research tool that is used to collect data and measure the role of CAC as an organizational body, usability challenges of the CAC portal, process challenges, and user satisfaction of the CAC portal were discussed.

6.2 Limitations of the Study

The following is the limitation of the study.

- Limited Scope: The study has a limited scope, focusing only on 78 responses and specific aspects of the CAC portal, such as usability, processes, and user satisfaction. This may not provide a comprehensive understanding of all users of the portal and the factors that impact the use of the portal.
- Data Collection Method: The study uses a single data collection method, such as online surveys through the use of a digital questionnaire, which may not capture the full range of experiences and perspectives of CAC portal users in Nigeria, Additionally, Physical survey or one-to-one interviews are necessary to compliment the study. A more physical face-to-face data collection method can help to gather information from CAC officials, Agents, and local business owners

in large Nigerian markets who may not have adequate computer knowledge required to both fill out digital questionnaires or use the CAC portal.

6.3 Suggestion for Further Studies

The study adopted was focused on descriptive statistics and Chi-square was used to test for association. Further study can adopt a comparative study to evaluate the usability, business processes, and user satisfaction of the CAC portal in Nigeria, as compared to other similar portals in other countries. This can help to identify best practices and areas for improvement.

Other studies can explore how the digital divide and IT Literacy can influence the perception of the business registration process in Nigeria.

Further studies can take a deep dive into organizational quality- to explore how ministries, departments, and agencies' internal processes impact e-service delivery to Nigerians.

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Appendix 2 Research Questionnaire

S/N	ITEMS	SD	D	N	A	SA
A	**Role of CAC as an organizational body**					
1	It is used for business organization, administration, and dissolution processes.					
2	To create and maintain business registrations and offices across the Federation, for which it is responsible.					
3	Establish and maintain a system for the oversight and control of the company or business formation.					
B	**Role of the CAC portal**					
4	It is used for creating an account and registering a business name.					
5	It can be used to reserve a business name.					
6	It can be used to make payments for business names.					
C	**Usability challenges**					
7	The categorization of CAC portal information and functions is reasonable; you can quickly find the information and services you need.					
8	Images, videos, and hyperlinks on the CAC portal are displayed properly.					
9	The guidance and instructions on the CAC portal are clear, easy to understand, and easy to operate.					
10	The CAC portal has real-time communication channels, such as online customer service.					

11	The CAC portal online service or email system, message boards, and other channels can reply to me in time and answer my questions and comments.					
12	Online payments can be completed within a specified time.					
13	The content and performance of the CAC portal will not be affected by using different browsers or Internet tools to open the portal.					
S/N	ITEMS	SD	D	N	A	SA
D	**Process challenges**					
14	The CAC portal has users' privacy protection settings, such as password authentication and mobile authentication.					
15	The CAC portal will protect users' privacy; I don't have to worry about personal information being leaked.					
16	There is no need to visit the CAC's physical office because all registration processes are completed online.					
17	I don't need an agent's help to complete registration because it's an easy process.					
18	There are rarely system failures when registering online.					
E	**Citizens' satisfaction with CAC service delivery**					
19	The function of the CAC portal is comprehensive, and the process of the CAC portal system is simple.					
20	My registered business name is protected.					
21	The CAC portal system can improve the efficiency of government services, and accelerate the pace of business.					
22	Information and services provided by the CAC portal system can meet my business needs.					
23	Government staff for offline services are professional and enthusiastic.					

24	The CAC portal will take the initiative to inform me of new information or services, according to records.					
25	On the basis of meeting the general requirements, the CAC portal also provides personalized customer service for different users.					

Note: Link to other analysis documents are available on request.