



**ONLINE BUSINESS REGISTRATION AT THE DEPARTMENT OF
TRADE AND INDUSTRY IN THE CONGO: A NORMATIVE MODEL**

BY

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DECLARATION

I, **Alain Michael Momo**, declare that the contents of this research represent my own unaided work, and that the research has not previously been submitted for evaluation towards any qualification. Furthermore, it represents my own opinions and not necessarily those of the Cape Peninsula University of Technology.

.....
Signed

.....15/06/2017.....
Date

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ABSTRACT

This thesis, through the lenses of technology acceptance theory, and considering the lack of online interactivity in service delivery, aimed at proposing a model of online business registration adoption for re-branding the government Department of Trade and Industry (DTI) Congo-Brazzaville. Task-Technology Fit (TTF) and Technology Acceptance Model (TAM) were the underpinning theories with which the study described the social phenomenon: online business registration adoption at DTI Congo-Brazzaville as branding tool. Arguably, in doctoral level, without underpinning theories, research conclusions look speculative. The use of theory to underpin this study was further motivated by its interpretative nature and the interplay between technical and non-technical factors which are involved in the process of technology adoption in service organisation.

To come up with new engagement, and informed from successful implementation of DTI South Africa's e-governance model, DTI Congo was used as case study; hence the country is known for being at the bottom of the pile when it comes to the ease of doing business ratings. Despite resultant benefits namely increased efficiency, effectiveness and improved service delivery that offer e-governance in making services nearer to citizens and easing the strenuous processes involved in manual operations, not all managers at the DTI Congo advocate the adoption of online business system. The problem is that insufficient advocacy of online business registration enforces the void of re-positioning the organisation vis-à-vis its internal customers (employees) as lean and innovative. The overall research question is: "how does the DTI Congo-Brazzaville intend to improve business registration using online business registration service as a branding tool"? The main objective therefore was to propose online service adoption re-branding and re-positioning DTI Congo-Brazzaville.

This led to the epistemological stance of the research to a combination of deductive and inductive reasoning in the case study methodology. Based on the conceptual framework, derived from the lenses of technology acceptance to tease out the problem, a mixed data collection method of observation, focus group and questionnaire was adopted. Probability sampling was used for a sample size of N=260

DTI Congo full-time employees from a total of 800. With 61 % of response rate, the data received from respondents were codified, analysed and interpreted in SPSS 22.

Research key findings include results from observation, focus group discussions, Cronbach's coefficient, correlation, regression and the general test for mediation. In two weeks of observation at DTI Congo, there were 24 walks-in and eighteen of them collected forms for new business registration purposes. The rest showed little interest for applying because they wanted to operate in agricultural and marine sectors, which unfortunately DTI Congo does not disclose fees to the prospects. Focus group participants agreed that an online business registration system will transform the business process at DTI Congo. However, some participants diverted from the rest and were very much concerned about government data safety over the Internet and lack of integrated coordination of DTI Congo's computer systems.

For better statistical inferences, Cronbach's coefficient was used to avoid testing relationships between unrelated variables. After test, the results of Cronbach's coefficient were satisfactory (between 0.70 and 0.84), indicating that questions in each construct are measuring similar concepts. Given the above, correlation analysis was conducted. It appeared that technology ($r = 0.271$) and personal growth ($r = 0.055$) were significantly correlated to internal communication at the 0.01 level, and only nature of work ($r = 0.135$) was significantly correlated to personal growth at the 0.05 level. Internet security ($r = 0.017$), e-governance adoption ($r = 0.381$), re-branding ($r = 0.383$), and re-positioning ($r = 0.376$) were significantly and positively associated with job satisfaction. Regression analysis was conducted to predict the relationships among variables within the process of technology adoption. In order to assess whether the regression suffers multicollinearity, the variance inflation factor (VIF) was calculated. All VIF values were less than 5, indicating there is no multicollinearity problem in the model. The results suggested that 54 % of the variance in job satisfaction at DTI Congo could be explained by behavioural intentions of employees' e-governance PEOU. The F-ratio of 14.90 ($p=0.00$) indicates that the regression model of e-governance adoption that improves working conditions and motivate employees on the motivational variables assessed was statistically significant. The results also reveals that nature of work, technology, personal growth and re-positioning variables were found to be significant in the DTI Congo context.

Government employees' data safety over the Internet was one of the significant factors in motivating management team for online interactivity adoption (stage 4 of e-governance). In order to provide a clearer picture of the role of cyber-security (government employees' data safety over the Internet), the general test for mediation was performed. Results show that data safety was significantly and positively related to online interactivity (stage 4 of e-governance) ($\text{sig} < 0.01$). As a result, it is reasonable to believe that government data safety may explain why DTI Congo's e-governance is still in stage 3. Considering the intention to propose a service-enabled technology adoption for quality service delivery, the model proposed in this research is based on Backus's e-governance model. The rationale is that Backus's e-governance definition fits better study concepts, and the model inspired DTI South Africa's online interactivity service and the city of Johannesburg's secure e-governance portal which was launched in 2005.

However, care has been taken to delineate that this study is about online business registration for legal operations aimed at reducing value chain cost and fast-tracking tax payment at DTI Congo. The study is not about registering a business to protect the rights of online buyers from fraud during online shopping. The study contributed theoretically, methodologically and the practically to the body of knowledge. The study contributed in the theoretical background for motivational (*the why*), conceptual (*the what*) and terminological foundations (*the how*) within the IS field and neighbouring discipline namely service marketing. Considering that similar study was conducted for DTI South Africa, methodological contribution of this research lies in comparative approach of content analysis data. Practically, the application of this research findings can reduce DTI Congo's value chain cost, motivate employees, increase job satisfaction and re-position the organisation in the mind of its internal customers (employees).

Key words: Congo-Brazzaville, online business registration, e-governance at DTI, nation re-branding, corporate brand identity, employee motivation, job satisfaction.

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DEDICATION

This thesis is dedicated to my late parents: Papa **César Momo Longendjo** and
Maman **Jeannette Ossako**

LIST OF ACRONYMS

Abbreviation	Meaning
AOL	American online
API	Application Programming Interface
ASP	Active Server Page
B2B	Business-to-Business
B2C	Business-to-Consumer
BBB	Better Business Bureau
BIC	Business Intelligence Centre
CBIC	Congolese Business Intelligence Centre
CC	Close Corporation
CFA	<i>Comptoire Français en Afrique</i>
CFBAP	Centre for Business and Administrative Procedures
CFE	<i>Centre de Formalités des Entreprises</i>
COM	Component Object Model
CORBA	Common Object Request Broker Architecture
CPU	Central Processing Unit
DA	District Attorney
DoL	Department of Labour
DoS	Denial of Service
DRC	Democratic Republic of the Congo
DSS	Decision Support Systems
DTI Congo	Department of Trade and Industry of Congo-Brazzaville
DTI South Africa	Department of Trade and Industry of South Africa
DTI	Department of Trade and Industry
E-authentication	Electronic Authentication

E-business registration system	Electronic Business Registration System
E-CI	Electronic Certificate of Incorporation
Ecommerce	Electronic commerce
EDI	Electronic Data Interchange
E-Government	Electronic Government
E-id	Electronic Identification Card
Email	Electronic mail
ESS	Executive Support System
EU	European Union
FAQs	Frequently Asked Question
GB	Giga Bytes
GDP	Gross Domestic Product
GE	General Electric
HD	Hard Disk
HR	Human Resource
HRM	Human Resource Management
HTML	Hypertext Markup Language
HTTP	Hyper-Text Transfer protocol
ICT	Information Communication Technology
IMF	International Monetary Funds
IS	Information Systems
IT	Information Technology
MNCs	Multi-National Corporations
MPI	Mobile Process Improvement
NCS	National Centre of Statistics
OFX	Open Financial Exchange
ONEMO	<i>Office National de l'Emploi et de la Main d'Oeuvre</i>
PC	Personal Computer
PPP	Processes, Procedures Policies
RAM	Random Access Memory
RBV	Resource-Based View
RC	<i>République du Congo</i>
RSS	Really Simple Syndication
SDLC	System Development Life Cycle
SET	Secure Electronic Transactions
SMEs	Small Medium Enterprises
SMMEs	Small Medium and Micro Enterprises
SMM	Social Media Marketing
SMS	Short Message System
SOAP	Simple Object Access Protocol
SSD	Social Security Department
SSL	Secure Socket Layer
TNCs	Transnational Corporations
TPB	Theory of Planned Behaviour
TRA	Theory of Reasoned Action
TTF	Task-Technology Fit

TV	Television
UK	United Kingdom
URL	Uniform Resource Locator
USA\$	Dollar of the United States of America
USA	United States of America
V-BASIC	Visual- Beginners' All-Purpose Symbolic and Instruction Code
VRIN	Valuable, Rare, Inimitable and Non-substitutable
W3C	World Wide Web Consortium
WSDL	Web Services Description Language
WWW	World Wide Web
XML	Extensible Markup Language

GLOSSARY

A number of key terms, which are used throughout the research study, are clarified below.

- **Business Model:** refers to a situation where a Company defines its business and customer needs and what has to be satisfied, together with distinctive competencies, collectively forms the company's business model to create value for customers (Autio, 2005).
- **Business:** Refers to a legally recognised organisation, which is designed to provide goods and services to consumers (Alabady, 2009).
- **Business Process Model:** Refers to processes of the same nature that are classified together as a model. Thus, a process model is a description of a process at a type level (Aaker, 2015).
- **Brand:** refers to is proprietary visual, emotional, rational, and cultural image that is associated with an organisation or a product, service, program, setting them apart from the competition (Andreasen & Kotler, 2003).
- **Brand awareness:** refers to the extent to which clients or customers recognise a brand (Andreasen & Kotler, 2003).
- **Brand contact:** refers to any information-bearing experience a customer or prospect has with the brand (Andreasen & Kotler, 2003).
- **Brand elements:** refers to trademark devices that serve to identify and differentiate the brand (Kotler & Lee, 2007)
- **Brand equity:** refers to the built up value an organization has gained through its formal and informal communications and activities (Kotler & Lee, 2007)
- **Brand essence:** refers to the core idea that one wants the brand to evoke in the target audience (Kotler & Lee, 2007)
- **Brand extension:** refers to the successful use of brand name to launch a new or modified product or service in a new category (Kotler & Lee, 2007)
- **Brand identity:** refers to brand names, logos, positioning, brand associations, and brand personality (Kotler & Lee, 2007)
- **Brand image:** refers to how consumers actually do, think, feel, and act with respect to the brand (Kotler & Lee, 2007).

- **Brand loyalty:** refers to the degree to which a consumer prefers and consistently chooses to purchase the same brand within a product or service class (Kotler & Lee, 2007).
- **Brand mix or portfolio:** refers to the set of all brands and brand lines a particular organisation offers to consumers in a particular category.
- **Brand performance:** refers to how well the product or service meets consumers' functional needs (Kotler & Lee, 2007).
- **Brand personality:** refers to the involvement forming relationships of trust between the organisation and its employees and individual audiences to be engaged.
- **Brand position:** refers to what distinguishes one organisation from another and differentiates and provides key reference points for consumers (Kotler & Lee, 2007).
- **Brand promise:** refers to marketer's vision of what the brand will do for consumers (Kotler & Lee, 2007).
- **Brand values:** refers to beliefs that guide daily behaviours and interactions, setting terms and expectations of the organisation-client relationship (Kotler & Lee, 2007).
- **Co-branding:** refers to the practice of using the established brand names of more than one company on the same product (Kotler & Lee, 2007).
- **Competitive Advantage:** Refers to a scenario when an organisation acquires or develops an attribute or combination of attributes that allows it to outperform its competitors. These attributes can include access to natural resources, such as high-grade ores or inexpensive power, or access to highly trained and skilled personnel. New technologies such as robotics and information technology can provide competitive advantage, whether as a part of the product itself, as an advantage to the making of the product, or as a competitive aid in the business process (Amabile, 1996).
- **E-commerce:** Refers to the process of buying and selling products and services via electronic systems such as the Internet and other computer networks (Bester, 2006).
- **Electronic governance or e-governance:** refers to the application of information and communication technology (ICT) for delivering government

services, exchange of information, communication transactions, integration of various stand-alone systems and services between government-to-customer (G2C), government-to-business (G2B).

- **Employee motivation:** refers to an intrinsic and internal drive to put forth the necessary effort and action towards work-related activities. It has been broadly defined as the "psychological forces that determine the direction of a person's behaviour in an organization, a person's level of effort and a person's level of persistence". Also, "Motivation can be thought of as the willingness to expend energy to achieve a goal or a reward...Motivation at work has been defined as 'the sum of the processes that influence the arousal, direction, and maintenance of behaviours relevant to work settings'." Motivated employees are essential to the success of an organization as motivated employees are generally more productive at the work place.
- **Internet:** Refers to the global system of interconnected computer networks that use the standards Internet protocol suite to serve billions of users worldwide (Bester, 2006).
- **Online:** Refers to the fact of being connected to the Internet. The connection can be via a telephone line, using a dial-up, a cable line via cable modem, or via a wireless connection (Burd, 2009).
- **Innovation:** Refers to a result of connecting two ideas, which, in principle, had no apparent or immediate connection in order to increase production (Baker, 2007).
- **Registration:** Refers to a document, which certifies an act of registering (Bianchi, 2014).
- **Supply chain:** Refers to the distribution of goods, services, and information flows between market participants within industries (Better Business Bureau, 2014).
- **Strategy:** Refers to a plan of action designed to achieve a particular goal (Ciborra, 1999).
- **Job satisfaction:** refers to how well a job provides fulfilment of a need or want, or how well it serves as a source or means of enjoyment. It is simply how content an individual is with his or her job; whether he or she likes the job or not. It is assessed at both the global level (whether or not the individual is

satisfied with the job overall), or at the facet level (whether or not the individual is satisfied with different aspects of the job. There are 14 common facets associated with job satisfaction: Appreciation, Communication, Co-workers, Fringe benefits, Job conditions, Nature of the work, Organization, Personal growth, Policies and procedures, Promotion opportunities, Recognition, Security, and Supervision (Better Business Bureau, 2014).

- **Marketing Strategy:** Refers to a strategy that combines all marketing goals into one plan (Congo Liberty, 2014).
- **Statistical Package for Social Sciences (SPSS):** Refers to a computer readable software programme, which processes empirical data that has been collected (Cumming, 2011).
- **The Republic of Congo:** Refers to a state located in central Africa, with Brazzaville as capital city (Congo Liberty, 2014).
- **Market space:** Refers to the virtual realm in which trading activity occurs in the market world, for example, if a person purchases an item over the Internet or through another type (Clarke, 2008).
- **Marketplace:** Refers to physical location in which supply and demand influence the decisions of buyers and sellers of goods and products (Centre Service and Innovation, 2015).
- **Digital signature:** Refers to an electronic rather than a written signature that can be used by someone to authenticate the identity of the sender (Credit Cards.com, 2014).
- **Business-to-Business:** Refers to the exchange of products, services, or information between businesses rather than between businesses and consumers (Colombo-Palacios, 2010).
- **Electronic authentication:** Refers to the process of establishing confidence in user identities electronically presented to an information system. It is a process closely related to identification. In online business registration, the username identifies the entrepreneur or their representative registering the business, while the password authenticates that the user is whom they claim to be. E-authentication presents a technical challenge when this process involves the remote authentication of individual people over a network, for the purpose of electronic government and commerce (David, 2007).

- **HTML:** Refers to a standardised system for tagging text files to achieve font, colour, graphic, and hyperlink effects on World Wide Web pages (Easley & Kleinberg, 2010).
- **XML:** Refers to a flexible way to create common information formats and share both the format and the data on the World Wide Web and Intranets (Frei, 2006).
- **Java:** Refers to a programming language and computing platform first released by Sun Microsystems in 1995. Lots of applications and websites will not work unless one has Java installed, and more are created every day. Java is fast, secure, and reliable. Laptops, data centre, game consoles, scientific supercomputers, and cell phones use Java applications over the Internet (Gesmann & Castillo, 2015).
- **JavaScript:** Refers to an object-oriented computer programming language commonly used to create interactive website effects within web browsers. It was developed by Brendan Eich while working for Netscape Communications Corporation, and released in September 1995. Thus, JavaScript of Netscape is different from Java of Sun Systems (Gorman, 2007).
- **Value Chain:** Refers to a chain of activities that a firm operating in a specific industry performs in order to deliver a valuable product or service for the market (Gounaris, 2005).
- **Inbound logistics:** Refers to the receiving and warehousing of raw materials from suppliers into production processes or storage. In value chain, technologies related to inbound logistics include transportation, material handling, material storage, communication, and testing and information systems (Graham, 2011).
- **Outbound logistics:** Refers to the warehousing and distribution of finished goods. In value chain, technologies related to outbound logistics include transportation, material handling, packaging, and communication and information systems (Goi, 2012).
- **Website design:** Refers to the planning and creation of Websites including the information architecture, user interface, site architecture, navigation, layout, colours, font, and imagery (Groenewald, 2008).

- **Website development:** Refers to the back-end of the Website, the programming and interactions on the pages. Web development focuses on how a Website works and how the users get things done on it (Johnson, 2013).

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CHAPTER ONE INTRODUCTION

1.1 INTRODUCTION

This chapter discusses the background and purpose of the study as well as an overview of the early investigation, which influenced the research, and the use of Information and Communication Technologies (ICTs) at the Government Department of Trade and Industry (DTI) in Congo-Brazzaville as nation branding strategy. This chapter further addresses key references that have enlightened early thoughts of the study and the understanding of this research field, which dwells in the junction of service marketing and Information Systems (IS). The chapter also determines the context of the study within the area of online business registration and service organisation branding, and highlights key issues related to the research problem that was identified.

The chapter provides a description of the research focus, which briefly outlines the background of the research, the underpinning theory and the approach to the literature review that was undertaken. Subsequently the chapter elaborates on research objectives, questions, hypotheses, research design, and the methodology that were applied. The chapter also concludes with an overall summary of the key issues addressed.

Branding precedes advertising, marketing, or public relations owing to the fact that one must first create brand, then raises awareness of it (Batra & Lane Keller, 2016). Even though building and achieving brand status is time consuming, organisations and country of any size with a name can be brands (HBS Marketing, 2009). The business use of IS in branding is measured by website traffic, inbound calls, appointments; hence branding provides identity, personality, and values to the business or country.

For re-branding and re-positioning purposes, European Union (EU) countries have adopted ICTs to deliver quality services, which simultaneously brought public services nearer to citizens, improved employees' working conditions and increased job satisfaction. Such strategic integration of ICTs in public service is known as e-governance, and defined as the application of electronic means in the interaction

between government and citizens and government and businesses, as well as the application of electronic means in internal government operations (Batra & Lane Keller, 2016; eSign, 2017).

Public service organisations are already positioned in certain way because of the nature of their offerings: uniqueness and mandatory. However, the use of ICTs improved internal communication, thus re-positioning the corporate brand (the organisation) in the minds of its internal customers (employees) as lean and innovative. Given the above, the argument that public sector organisation should focus on service delivery only, and less on re-branding is obsolete (Centre of Excellence for Public Sector Marketing, 2016).

Bharati and Chaudhury (2006:88-89) argue that online service delivery platform plays catalytic role in the organisation and nation branding in USA. The authors examined the drivers of online service delivery across public service organisation's value chain (Bharati and Chaudhury, 2006:88). Respondent organisations belonged to various sectors including manufacturing and health care. Authors revealed that online service delivery has permeated public organisation's value chain, transformed their performance, and improved the functional relationship between inbound and outbound logistics, improved internal communication and working conditions, increased job satisfaction and employees motivation.

According to Bharati (2005:71), India's online service delivery has emerged as an important business sector in the country's economy. It is noted that online service delivery became a leading factor for business between Indian and American governments. The American government for example supports a 70-70-70 business strategy when dealing with India. The 70-70-70 business strategy mandates the outsourcing of 70 percent of service-related works, of which 70 percent is given to Indian strategic suppliers, who in turn execute 70 percent of the work in India, and deliver finished products to America via the Internet (Bharati, 2005:71-75). The main factor underlying the growing utilisation of online service delivery in India is the need for the government to remain globally competitive, improve internal communication in the organisations and job satisfaction (eSign, 2017).

Online business registration in New Zealand plays a significant role in New Zealand's DTI owing to the country's geographical remoteness from the rest of the world. Regardless of various constraints related to New Zealand funding, 35 per cent of New Zealand's Gross Domestic Product (GDP) is generated by wired online service systems (International Monetary Fund, 2016).

In South Africa, the economy relies on online service delivery in almost every transaction (Pillai, 2010:3). Computer networks are utilised in stores, restaurants, law enforcement offices, manufacturing and electrical plants to store and process data. Implementation of computer networks in South Africa affected positively the perceived value of the country as brand by entrepreneurs and corporates. Currently, reliance on computer networks is so absolute that public service organisations in South Africa would dysfunction if computer networks were removed (International Monetary Fund, 2016). Conclusively, technologies enabling online business registration were introduced at the South African Department of Trade and Industry (DTI), which enabled entrepreneurs to register businesses electronically and improved employees' working conditions. Of the late, online business registration reduced errors, operations cost and improved internal communication (DTI South Africa, 2017). Similarly, online business registration system adoption at the DTI Congo will redesign the Congolese DTI's interface and stakeholders, improve working conditions, communication within directorates, job satisfaction, thus re-positioning the organisation vis-à-vis to its internal customers (employees) as lean and innovative.

1.2 RATIONALE OF RESEARCH

1.2.1 Background to the research problem

Currently, to register a new business at DTI Congo, entrepreneurs use word-of-mouth, calculators, spreadsheets and yellow page as Decision Support Systems (DSS) (Congo-Brazzaville Chamber of Commerce, 2017). The lack of online business registration creates dysfunctions in internal communication, which can frustrate and demotivate front-line employees. Front-line employees provide a link between external environment and the internal operations of the organisation. They assume critical functions in understanding, filtering and interpreting information and resources

to, and from the organisation and its external constituencies. Nevertheless, front-line employees face high-stress level at DTI Congo because they are required to have extraordinary levels of emotional labour to handle interpersonal and inter-organisational conflicts. In addition, they are called to make real-time trade-offs between quality service delivery and productivity on the job, which can result in failure to deliver in emotional labour, and widens service performance gaps (Abubakari, 2016). From the above, it is arguable that relationships exist between employee satisfaction, working conditions and organisation competitive advantage. Delivering services in innovative way can, in turn, reinforce employees' sense of satisfaction in their jobs. Even in public organisations where most of the services are unique and mandatory, unless service-enabled technologies are adopted, job satisfaction and employee motivation will be difficult to achieve (Word Numbers, 2017; United Nations Conference of Trade and Development, 2016).

According to Šumak, Polančič and Heričko (2009:8), online business registration systems at the DTI Congo will boost the country's economic confidence, transform marketplace and promote economic interactivity (Amazon.com, 2015). More than that, online business registration system implementation at DTI Congo will create openness of Internet technologies and attract investment for the country's sustainable development (OECD, 2010: 11; Niemey & Knudsen, 2000:85). Arguably, Internet technologies enabling online interactions will transform the way services are offered in each country, including Congo-Brazzaville (OECD, 2010:11).

Moreover, rapid changes in the global business environment can increase the risk of new business failures in Congo-Brazzaville (Thomas, 2004:47). DTI Congo should anticipate the change by adopting strategies which develop and empower human capital in public service organisations (DTI South Africa, 2017). Cassidy (2002:3) and Durie (2001:10) argue that online business registration being an electronic way of nearing services to citizens; will also add value in the supply chain (Javalgi 2004:560-565). In Congo-Brazzaville, registering a business is required for tax purposes and legally allow businesses to operate by issuing them operation permits. However, the extent to which DTI Congo would adopt online business registration underlines new engagement in reducing value chain cost in the process of securing company name, legal liability protection as well as continuity of business activities.

In return, the above-mentioned services would be interconnected with other public service organisations. Therefore, adopting online business registration service at DTI Congo can enhance the country's competitiveness and re-positioning. Through online information dissemination, other public organisation will be simultaneously informed about newly registered business.

Currently, online business registration is a service, which is much demanded but does not yet exist in Congo-Brazzaville. Looking at the current Congolese public service landscape, which is overwhelmed by political appointments, advocating new online interactive platform is challenging. Machiavelli foresaw challenges related to the adoption of a new platform, and argued that "*there is nothing more difficult to plan, more doubtful of success, nor more dangerous to manage than the creation of a new system*" (Stair, 1986: 360-361).

1.2.2 Problem statement

Given the background stated above, this study investigated the problem within the sphere of service marketing, focusing on online business registration, which allows one to electronically register and obtain a business permit without physically walking into official premises (Kluwer, 2016). It is argued that the adoption of the ICTs at the government department of trade and industry is positively related to the concept of organisation and nation re-branding and re-positioning (Mugobo & Wakeham, 2014: 301). It is a strategy that many countries adopted in order to promote the country image and attract investments. It should be noted that not all economic sectors of a country are affected by technologies enabling online service delivery. For example, telecommunication, military, enforcement and public health would much depend on the Internet technologies than the petroleum and metal industries (David, 2007).

However, Congo-Brazzaville is known for being at the bottom of the pile when it comes to the ease of doing business ratings. The country is ranked 178th out of 189 for ease of doing business (Doing Business, 2015). These findings are cause for concern especially as there is growing awareness that Congolese public organisation's inability to compete in a fiercely competitive international economy spells ruin (United Nations

Conference of Trade and Development, 2016; World Economic Forum, 2014). Despite resultant benefits namely increased efficiency, effectiveness and improved service delivery that offer e-governance in making services nearer to citizens and easing the strenuous processes involved in manual operations, not all managers at the DTI Congo advocate the adoption of online business registration system (Fovinoa, Guidib, Maseraa, & Stefaninia, 2013; Ramnarain & Govender, 2013). The problem is that insufficient advocacy of online business registration enforces the void of re-positioning the organisation vis-à-vis its internal customers (employees) as lean and innovative (Yoland & Watkins, 2012; Treiblmaier, Henderson, Hunter, Hudson & Murphy, 2009).

Subsequently, some countries including South Africa have realised that e-governance does have the potentials to enable government department to migrate from good to great corporate brand, motivate employees, nurture businesses and ignites competitive nation branding for ease of doing business. The rationale of advocating online business registration is an attempt to make DTI Congo knowledgeable of market dynamics (Yétéla, 2012; Davenport, 2013). However, various factors highlight this online service delivery stunt and belated adoption in Congo-Brazzaville. Firstly, after the country's independence from France in 1960, the economy remained turned towards the economic needs of the coloniser; hence the main economic focus was on oil exploration (Kluwer, 2016). Secondly, even though revenue generated from oil exploration created opportunity sufficiently necessary for public organisations to adopt technologies enabling online service delivery; insufficient awareness was a challenge. Thirdly and sadly, dependency on oil revenue and work in the oil fields weakened managers' ability to embrace innovations aimed at improving working conditions and service delivery, which otherwise could have enforced the necessity for online business registration system in the activities of DTI Congo (*Forum des Jeunes Entreprises du Congo*, 2010).

1.2.2.1 Problem conceptualisation

The concept of a framework is defined by Onyancha (2017), who argues that frameworks limit inquiry and direct the attention of the researcher to critical features of the social phenomena under study. Frameworks offer a base for investigation by specifying general relationships among research variables. It is arguable that this framework intends to organise the inquiry but cannot provide explanations for, or

predict, behaviour and outcomes of online business registration system at the Government Department of Trade and Industry (GDTI). Explanation and prediction lie in the realm of theories of the technology acceptance. The intent behind developing this conceptual framework in Figure 1.1 is that it could lead to new engagement: online service delivery at the GDTI.

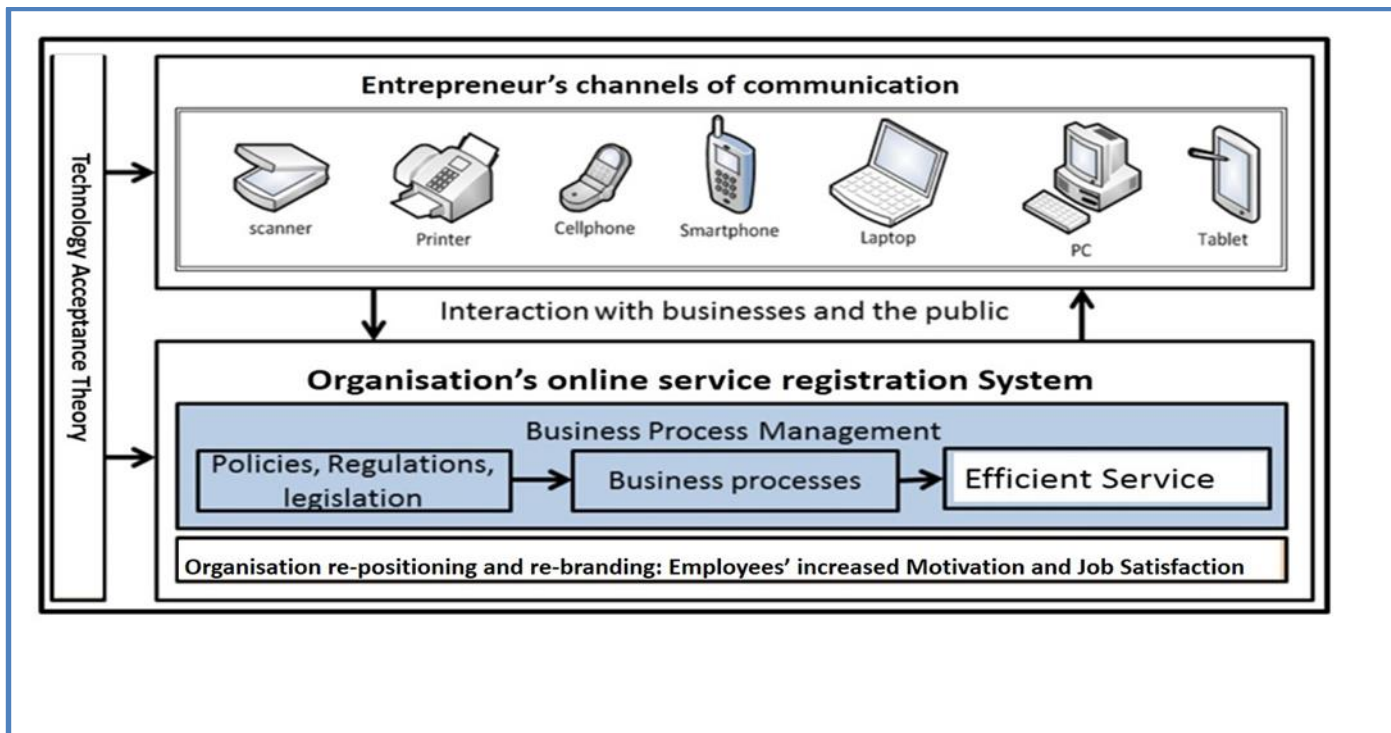


Figure 1.1.: Conceptual framework

Arguably, components from Figure 1.1 namely: scanner, printer, cell phone, smart phone, laptop, PC and tablets represent communication tools readily available in the hands of entrepreneurs. Thus, customer-focus service organisations capitalise on these tools through Mobile Process Improvement (MPI) in the way they engage with service users. Private and public organisations implement online service delivery technologies under MPI programme for re-branding and re-positioning to meet new holistic marketing approach focusing on the employees to anticipate market dynamics. From Figure 1.1 MPI implementation has to comply with business processes, procedures and policies for online service delivery to yield desired results namely: effective, efficiency, environmentally friends and agility.

Public organisations with departments scattered nationwide and remote employees often lack efficiency and accountability when engaging with stakeholders. For example, mobile positions in government department such as sales agents, inspectors, consultants or contractors might report late or deliver poor customer service without being held accountable.

However, the MPI application has the potential to inform head of directorate where employees are at any given time of day, and whether or not their customer service performance is below or above organisation's nationwide averages. Current growing concern of climate change and global warming request private and public organisations to observe environmentally friendly practices; and support green value chain initiatives. MPI implementation has the potential to replace paperwork in business process by paperless administration. For example, replacing traditional business registration service by online one, in government department would reflect a true commitment to sustainability in a way far more impactful than recycling papers in the bin (Kluwer, 2016). Efficiency, effectiveness, accountability and green value chain practices predispose the organisation's capability to rapidly change, adapt in response to market dynamics, while improving working conditions and job satisfaction. Research objectives are discussed next.

1.2.3 Objectives of research

In order to address adequately the research problem stated above, a research object was formulated. Considering the lack of interactive online service delivery, the main objective therefore was to propose a model of online business registration adoption for re-branding DTI Congo-Brazzaville. The secondary research objectives were:

1. To determine factors needed to create new marketing normative online business registration model for DTI Congo;
2. To consider DTI South Africa's online business registration model as source of inspiration for DTI Congo model;
3. To determine DTI Congo's readiness for online interactive service delivery;
4. To determine employees' role in online service delivery at DTI Congo;

5. To determine how online business registration platform can become transformational innovation tool for DTI Congo;
6. To determine how online business registration platform would affect DTI Congo's value chain;
7. To determine how DTI Congo's online business registration platform can become a source of competitive nation branding for ease of doing business;

1.2.4 Research questions

To be able to tease out the research problem and objectives, the main research question was: How does the DTI Congo-Brazzaville intend to improve business registration using online business registration technology as a branding tool? The research sub-questions were:

1. What is the level of readiness for online service process at DTI Congo?
2. How does online business registration platform of DTI South Africa influence the inception of DTI Congo model?
3. How can DTI Congo protect e-government classified information from Internet criminals?
4. What are the benefits and challenges of online service adoption at DTI Congo?
5. How can online service adoption reduce DTI Congo's value chain cost?
6. What is the impact of e-governance on nation branding strategy?
7. Why online service delivery model is necessary for DTI's worldwide?

1.2.5 Research hypotheses

An hypothesis is a specific statement of prediction which describes in concrete terms study directions. Research hypotheses were crafted as “educated guess” to provide a suggested solution based on the evidence (Onyancha, 2017). In line with research questions, research hypotheses were drawn:

H1: Employees’ data safety is positively related to e-governance website usage, which in return is catalytic to quality service delivery;

H2: considering the benefits of e-governance, DTI Congo’s potential online business registration system can transform service process, and add value;

H3: customer’s satisfaction is positively related to quality service delivery (internal customer’s happiness), hence; service-enabled technology adoption in public service organisation can re-brand and re-position it vis-à-vis to internal customers.

1.3 ETHICAL CONSIDERATIONS

With the help of DTI Congo-Brazzaville General Manager, research consent letter was issued to the researcher (see Appendix B), allowing the DTI Congo full-time employees to co-operate with the researcher. The purpose of the letter was to present the study objectives to DTI Congo employees (Shivute, 2007: 34). Hence respondents’ first language is French, English and French back-to-back translation was utilised for better understanding of the questionnaire. The following ethical considerations were addressed throughout the study:

1. To ensure that participation in this research study is voluntary;
2. To allow respondents’ freedom in terms of participation;
3. To ensure that no physical or mental harm, could be afflicted on the respondents;
4. To guarantee the anonymity of the various research participants;
5. To ensure that data collected were treated with full confidentiality, and individual employees participating were treated without prejudice; and

6. To ensure that quality control and secure storage of data will be maintained.

1.4 DELINEATION OF THE RESEARCH

Care has been taken to delineate that this study is about online business registration for legal operations aimed at reducing value chain cost, fast-tracking tax payment at DTI Congo. However, it is not about registering a business to protect the rights of online buyers from fraud during shopping online by making a compulsory for online seller to register their business with companies like Paypal, SenangPay and many others that work as merchant banks.

There are various e-governance models that service organisation can choose from and improve service delivery. However, this research was inspired by Backus (2001) e-governance model. The rationale of this choice has two dimensions. The first is based on Backus (2001) e-governance understanding which fits better study concepts; hence arguing that e-governance is more than just a government Website on the Internet; and define e-governance “*as the application of electronic means in the interaction between government and citizens and government and businesses, as well as in internal government operations*”. The second dimension is that Backus (2001) e-governance model inspired South Africa’s; hence, on June 8, 2005, the Gauteng province launched the Gauteng Provincial Government Internet portal equipped with employees’ data safety features. The Gauteng Online portal (<http://www.gautengonline.gov.za>) gives members of the public access to e-government services and information about services for citizens, business, employees and other government entities.

The study dwells in the junctions of service marketing, online service delivery technologies and nation branding through Government Department of Trade and Industry IS infrastructure, which is an evolving theme. However, as Department, arguably, DTI Congo should weight current study outcomes, available resource and contemporary online service delivery technologies in order to make informed decision in terms of technology adoption. It is the first time that such a study has been conducted in both countries, which focused on proposing e-governance model based on DTI South Africa’s for DTI Congo-Brazzaville. Given the above, the next section discusses the significance of the research.

1.5 SIGNIFICANCE OF THE RESEARCH

The benefits of electronic business registration in Congo-Brazzaville are documented (Momo & Ukpere, 2011). Despite the growing interest in the use of information and communication technologies (ICTs) to improve service delivery and re-brand public sector organisations, there is little academic marketing literature attempting to explore the potentials of an online business registration platform as a re-branding tool for service organisations. Given the above-mentioned discussion, this research contributed theoretically, methodologically and the practically to the body of knowledge. The study contributed in the theoretical background for motivational (*the why*), conceptual (*the what*) and terminological foundations (*the how*) within the IS field and service marketing. Considering that similar study was conducted for DTI South Africa, methodological contribution of this research lies in comparative approach of content analysis data. Practically, the application of this research findings can reduce DTI Congo's value chain cost, motivate employees, increase job satisfaction and re-position the organisation in the mind of its internal customers (employees).

The overall benefit of the study is exposing the findings of the research to public service organisation in Central Africa, and open avenues for causal experimental study to measure the efficiency and effectiveness of e-governance in municipalities of Pointe-Noire and Brazzaville. Future studies could be looking at online business registration usage from the business owner's perspectives. Another option for future studies could be investigating business registration for online services, market and advertising. From this perspective, it would be that business owners put their businesses on the Internet and sell online. Trajectory of the thesis is discussed next.

1.6 SOURCES OF INFORMATION

Given the study objectives, the researcher explored related literature on the themes of service marketing, e-governance and public organisation re-positioning and branding. Considering that the study is multi-disciplinary in nature, a multi-disciplinary approach was adopted. Secondary data from the areas of organisational behaviour, service marketing, e-governance, strategic management were reviewed. Since the study dwells on online business registration and aimed at proposition a model for online business registration adoption at DTI Congo, current sources of information (DTI South Africa model) were used to test the feasibility of the model extension.

However, other sources of research information included textbooks, journals and online articles. Universities and public libraries were also accessed, while experts in the field e-governance and online business registration were contacted to gain additional information about special issues pertaining to the research.

1.7 INTRODUCTORY LITERATURE REVIEW

1.7.1 Online service adoption for organisation re- branding

Organisations with strong brand built familiarity between service delivery processes and employees. That familiarity focuses on resource allocation in the consultation process, service standards, information access, courtesy, openness, transparency and value for money. Thus, countries which have adopted online service in public organisations, not only that they re-branded themselves as business or tourist destinations; but most importantly technology adoption enabled employees to track customer data more easily, increased productivity in a way that reduces weekend work and over-time (Metric Marketing, 2017). It is agreeable that online service delivery system would embed guest blogging, social media interaction, content networks, behavioural targeting and re-messaging to re-position the organisation as innovative in the mass level. Considering that familiarity with and interest in online service delivery varies widely among employees, organisation re-branding efforts would reflect on customised training that caters for those differences. Hence, some employees might prefer an online training session; while others might need a handholding and support in the form of a personal coach (Business Balls, 2017).

Internalisation and integration of country as brand leads to the service delivery technologies being lived by government employees of that country, and being upheld at all points of contact. A country's IS infrastructure development at Department of Trade and Industry (DTI) has the potentials to enable both managers and employees to witness corporate re-branding and re-positioning in business registration process. Figure 1.2 illustrate inter-relations between corporate re-branding strategy, human resource performance, communication, resource allocation and online service adoption intention.

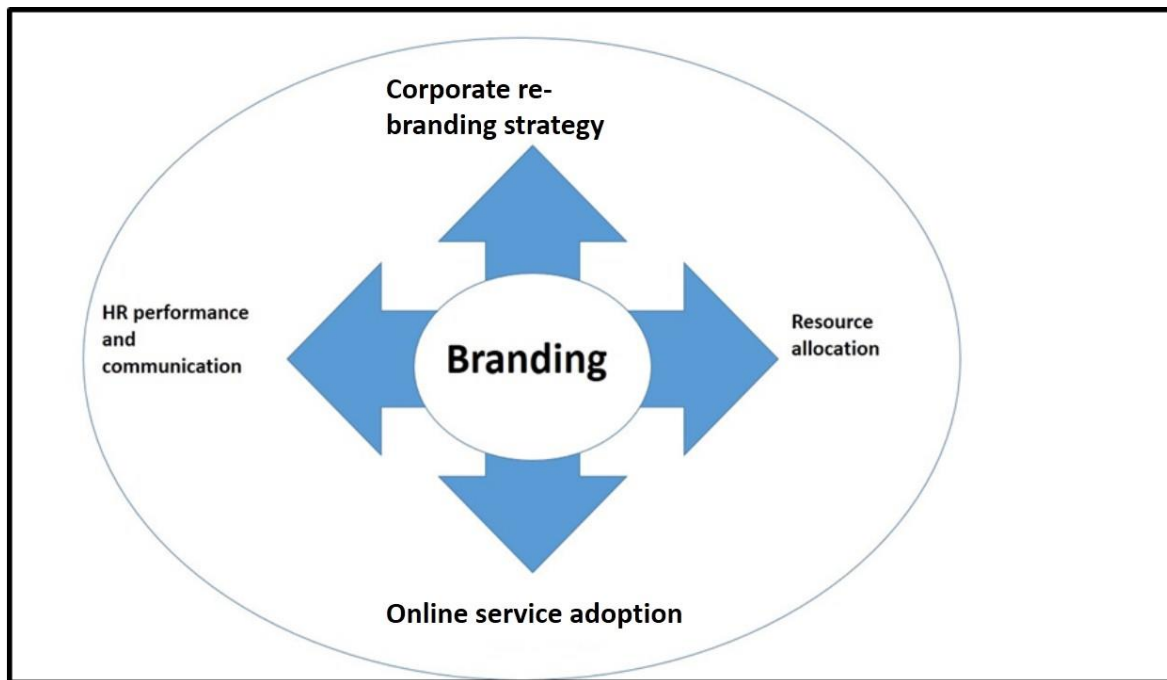


Figure 1.2: Service organisation online system and re-branding strategy

According to Kotler and Lee (2007), with the use of the internet, branding provides greater leverage of marketing resources for service organisation owing to the fact that branding strategies are not restricted to advertising only; indeed a strong brand can spend less on marketing and save in value chain costs. Similarly, whether in the public or not-for-profit sectors it is not uncommon for the product offering to be an idea, a cause, or a service. Using the Internet to promote these intangible offerings can often be challenging. However, the Internet enables both sectors to make the delivery of intangible product or service more efficient and effective (Mphidi, 2017). Corporate brand identity, defined “*as what the organisation is, what the employees do on daily basis, why they do it, and who they do it*”; has the potential to increase organisation’s long-term sustainability, enables brand equity and employee motivation and job satisfaction (Kotler & Lee (2007)).

1.7.2 The process of building and implementing brand identity

It is agreeable that brand identity efforts start with the development of a business model that takes into account the organisation’s mission, vision, employees and market input. An organisation’s brand identity process would consider internal and external research, the development of potential branding models, validation of

proposed model, timeframe period of implementation (Kluwer, 2016). Whether public or private organisation, building brand identity would request internal assessment of brand's present position. Online service adoption enables organisation re-branding in the mass level through social media, public relations and community involvement. However, developing effective graphics and visual representations of the brand are insufficient in themselves for re-branding public service organisations. The reality within the organisation requests that the employees' attitudes and behaviours towards new technology have to be in line with the brand values projected.

Given the above, the backbone of public service organisation re-branding is in the individual level of every employee. Public service organisations should use internal marketing to communicate brand values among employees. In so doing, they motivate, encourage their internal team to better understand the corporate brand identity and improve commitment, enthusiasm and consistent behaviour in service delivery. Private organisation competes with firms offering similar products and targeting same market niche, however, government department would compete with other departments in terms of quality service delivery. For example, in South Africa Woolworth competes with Shoprite, Checkers, Spar and Pick n Pay in the retail. However, government department such as the enforcement competes with the home affairs in terms of quality service delivery to citizens (Kluwer, 2016). Considering that branding starts from inside and moves outward, the government department delivering quality service electronically has employees with high internal practices and attitudes to deliver the promise (great brand identity) than the others, because simply making promises in the organisation's website has no value without employees' commitment.

The process of building and implementing brand identity requests that organisations conduct brand identity assessment. The assessment would indicate the existing state, gaps and future desire state of the brand. Brand identity assessment would also determine where the brand stands in the mind of employees, first. The argument in Figure 1.3 suggests that only once the existing state of brand is determined, that the organisation would make decisions about where the brand should be, and how to get there.

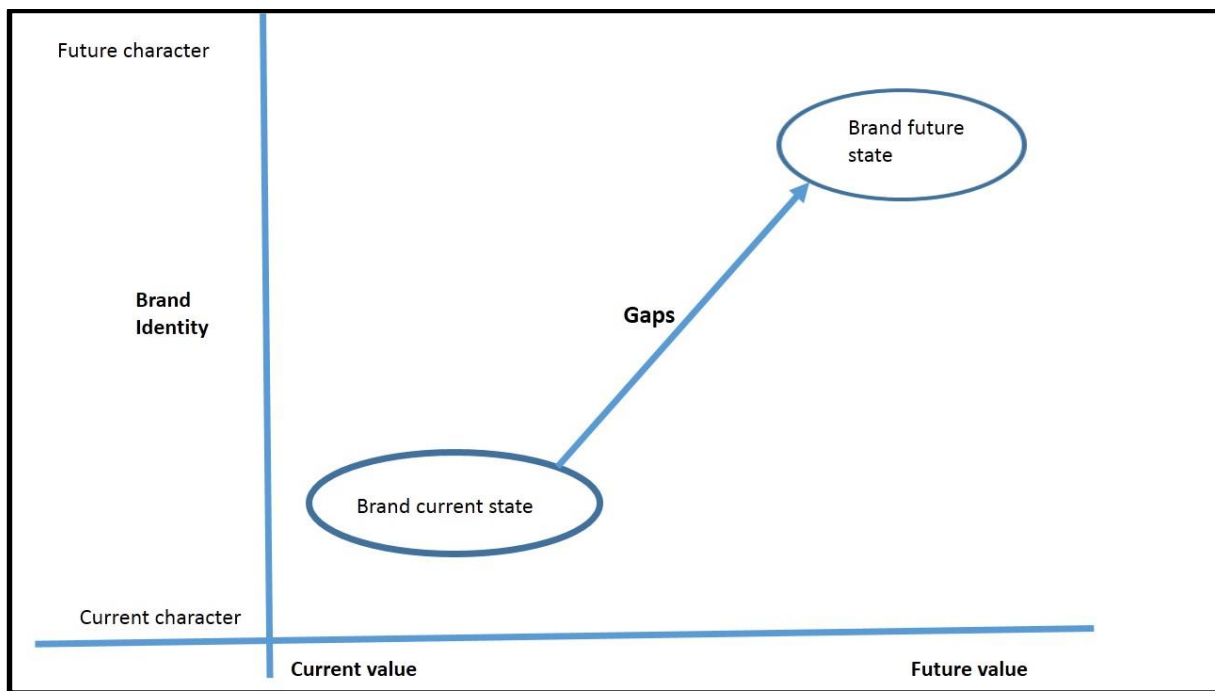


Figure 1.3: Corporate brand identity

Figure 1.3 articulates organisation’s brand desired identity which translates the way the primary target audience (employees) would think, feel, and react when they are exposed to the brand. Arguably, Figure 1.3 illustrates organisation’s opportunity to envision the target audience’s response. Thus, the path of brand identity requires that managers in the organisation identify gaps between the reality and the ideal situations.

More than that, the competitiveness of a brand in public sector is positively related to the inclusion of all stakeholders who believe in the building process. Senior, middle and lower managers, full-time, part-time employees and contractors including volunteers should live integrated brand promise in the organisation’s culture (Kluwer, 2016). The buy-in from all stakeholders relies on an investment in hiring and training; which plays a key role in the implementation of the branding identity. According to Andreasen and Kotler (2003), this task should never be neglected because staff in service organisations are the ones who carry out the positioning and therefore can easily undermine even the best branding initiative. Furthermore, it is argued that getting the buy-in from all stakeholders (internal and external) in the process of building brand identity differentiates an average service organisation and a great one. Corporate brand translates meaning about organisation’s offerings. Thus, all the service employees should support and integrate the brand. For example, if a

government department would like to brand themselves as tech savvy and convey to citizens that they deliver services electronically, therefore, everything from letter heads to website should reflect that they are tech savvy; yet staff to support and emulate such image.

1.7.3 Internet and strong brand identity

Great brand associates name, slogan, logo and colours with consistent use of characters, music, signage or packaging as core elements of the brand. The Internet is a crucial tool to guide the employees in promoting the six factors guiding the selection of strong brand: memorable, meaningful, likeable, transferable, adaptable and protectable (Abubakari, 2016). Memorable brand is easily recalled or recognised. For example, short and catchy brand names and phrases such as Click It or Ticket are easily recalled. Marketers can index brand name in search engine such as Google for consumers to recover it, should they spontaneously forget. Meaningful brand announces the product or service to the target audience. Internet has the potentials to timeously provide relevant information intended to invite the audience to accept or reject the product.

Likeable brand has aesthetic and design appeal. Brand's website has the potential to propose brand elements both virtually and verbally; thus making it likeable. It is agreeable that Internet has potentials to make brands transferable. Transferable brands are able to use brand elements under consideration to introduce new products or service in the same or different categories. For example, a government department might introduce online business registration system; and further introduce another service such as online tax declaration (Abubakari, 2016).

Adaptable brands remain updatable in the long run. The association of the Internet and branding has the potentials to combine all brand elements and make it relevant in future. Protectable brands would be legally protected inside and outside of country jurisdiction. The use of the Internet creates brand awareness worldwide. As such, brand would be known and competitors would avoid duplicating it. Generic brand can be used by anyone; however, some brand names: *Kleenex*, *Xerox*, and *Jell-O* retained their trademark rights and never became generic.

1.7.4 Branding government department and not-for profit organisation

In general, any organisation either governmental or non-governmental needs branding. However, both governmental and non-governmental agencies face shared across and specific challenges when implementing a branding strategy (Abubakari, 2016). When re-branding public sector organisation, several aspects to consider include values, proposition and brand essence. Service organisations should regularly communicate the brand values and promise from within the organisation. This approach encourages internal teams (employees) to better understand the brand and organisational culture.

Branding is senior management team initiative. However, in some organisations, branding fall under marketing and communications functions. In such case, when marketers leave the organisation, the branding initiative would lose momentum because the senior management team had not bought into the branding initiative (Abubakari, 2016). Andreasen and Kotler (2003) share the view that momentum in branding should start from senior managers. The rationale is to keep enthusiasm and support of branding strategy even when marketers leave the organisation. Arguably, not only does senior management play a key role in branding strategy, they also need to be made aware and understand that branding is a long term process that requires long term commitment.

Proposing online service model which integrates branding strategy would be much easier when employees are committed to the goals of the organisation. A study conducted by Centre of Excellence for Public Sector Marketing (2009) in Canada about public sector branding reveals that *Parks Canada* employees and the Canadian Blood Services employees were much involved in branding efforts than Canada Post Corporation employees. The main reason was that employees at *Parks Canada* and the Canadian Blood Services were involved daily in branding efforts compared to Canada Post Corporation employees who were being briefed monthly about branding strategy. Conclusively, employees at *Parks Canada* and the Canadian Blood Services were highly motivated.

Parks Canada and the Canadian Blood Services implemented a strategy to motivate employees, which aligned rewards systems, level of involvement in the brand building process, hiring and training practices according to brand promise. Organisation nature

and employees status have the potentials to challenge branding strategy. Part-time and contractual employees would be difficult to motivate to live brand promise because of their temporary commitment to the organisation. Thus, involving part-time and contractual employees in the early stage would be critical to the success of branding initiative (Abubakari, 2016).

Further, organisational focus can represent a challenge in branding initiative. It is in the views of Andreasen and Kotler (2003) that every operations and finance driven organisation can impede branding strategy than marketing driven one. Therefore, seeking senior management involvement at early stage is crucial because early involvement of internal stakeholders is an opportunity for the organisation to gain a wide range of ideas and perspectives; as well as give employees a sense of ownership to the brand. Arguably, government department and not-for profit organisation with strong corporate culture that need to change their image in terms of service delivery may find it challenging to re-position. It is difficult to establish a new brand when the organisation is strongly linked to a previous one. For example, the Red Cross, Canadian Blood Service, South African Revenue Service (SARS) and the department of trade and industry (DTI) are illustrations of organisations that have a strong link to a brand that could be hard to disassociate with. Brand re-positioning strategies would require more resource allocation in order to engrave new service delivery process image in the mind of employees.

Highly motivated and satisfied employees are pre-disposed to engage in the organisation re-branding process. Many public service organisations focus all their branding efforts on marketing activities such as advertising campaigns and packaging, yet one of the most powerful brand assets the organisation has is the employees. Indeed 41% of managers in public service organisation in South Africa believe that employees are the most credible source of information regarding business operations. When a citizen interacts with one of the frontline employees, brand promises stated in public relations communications and marketing departments are put to the test (Abubakari, 2016). Given the above, it is agreeable that to build a strong corporate brand, organisations should consider employees as brand ambassadors who are thoroughly engaged, motivated, empowered, satisfied with working their conditions, connected and committed to deliver effective and efficient service in innovative way.

1.8 RESEARCH DESIGN AND METHODOLOGY

This research is an empirical study. Arguably, research is a means through which researchers attempt to find answers to provide solutions to problems (Struwing & Stead, 2001:6). Brynard and Hanekom (2006:3) suggest that research is a procedure by which an enquiry is made in order to obtain answers to questions and to solve problems in a systematic manner with the support of variable facts. The nature of research dictated quantitative and qualitative methodologies combined (Leedy, 1989:140) for a better understanding of the research problem that was identified. The two research methods are discussed in the following sub-sections.

1.8.1 Quantitative methodology

Leedy (1989:5) argues that quantitative method is a systematic and objective process that investigates a particular problem by using numerical data. Quantitative research methods include self-administered questionnaires and surveys (Babbie & Mouton, 2001: 130). A self-administered questionnaire was used and participants were given sufficient time to respond.

(a) Population

The targeted research population comprised of 800 DTI Congo full-time employees who live in Brazzaville and Pointe-Noire, including males and females. For efficiency purposes, this study stratified DTI Congo full-time employees from the part-time and sub-contractors.

(b) Sampling

The study used stratified sampling technique. Stratification consisted of dividing the entire population into different subgroups namely city of Brazzaville employees isolated from those of Pointe-Noire, full-time employees were isolated from part-time and contractual ones; then were randomly selected for the final sample.

According to Struwing and Stead (2001:122), stratified sampling technique is the process of dividing members of the population into homogeneous subgroups (strata) before sampling. The rationale was to improve the representativeness of the sample by reducing sampling error. A sample size of $N = 260$ DTI Congo full-time employees from the total of 800 was used (Stat Trek, 2010).

(c) Questionnaire design

This study used survey questionnaire. The rationale of using questionnaire was to elicit information by requiring respondents to answer objective questions (Brace, 2004:9).

1.8.2 Qualitative methodology

Arguably, qualitative research studies involve considering human actions from an “*emic*” perspective (Babbie & Mouton, 2001: 217). This research used the following qualitative method techniques:

(a) Focus group

Focus group research technique was used in this study. The rationale was to gain a broader understanding of the research problem (Brace, 2004:5). Selected according to their level of IT awareness and position, five DTI Congo full-time employees were invited for focus group.

(b) Direct observation

Observation technique was applied in the form of field research in Brazzaville and Pointe-Noire. The researcher observed challenges faced by DTI Congo employees in the brick-and-mortar business registration process. It was noted that inbound logistics is associated with the receipt and dissemination of business permit application submitted by the customer (potential service user). In the first step, receiving business permit application and forwarding such application to the appropriate directorates could take 3 to 10 days. During the second step, which is operations, the relevant directorate at the registrar office is concerned with inputs evaluation, which would determine whether the output is satisfactory, or not. This assessment and manager’s signature often takes 5 to 15 days. The third step of outbound logistics consists of storing granted certificates of incorporation, and collection and distribution of the outcomes; which would take 2 to 3 working days. The fourth step, which is related to the marketing activities of the registrar, would be associated with the availability of front office staff to help customers in collecting the outcomes only during business hours. When customers come to inquire for the outcomes, front office staff inform applicants whether the certificate has been granted or not. If it was denied, they friendly explain the appeal process and the way in which customers could acquire the

product (business permit). The rationale was to experience what it is like when there is no other alternative to register a business but to follow the only lengthy and bureaucratic process of traditional business registration.

1.9 TRAJECTORY OF THE THESIS

Summarised below is the thesis structure, as well as a brief description of the content that appears in each chapter. The study was organised into six chapters as shown in Table 1.1.

Table 1.1: Research trajectory

Chapter 1	Introduction
Chapter 2	Literature review
Chapter 3	Underpinning theory
Chapter 4	Research approach
Chapter 5	Data analysis and interpretation
Chapter 6	Conclusion

1.9.1 Chapter one: Introduction

Chapter one provides an introduction to the thesis topic, a brief explanation of the background, the purpose of the study, the research methodology and objectives, and the importance and relevance of the research.

1.9.3 Chapter two: Literature Review

Chapter two presents a literature review of published literature sourced from publications and marketing journals to identify and expose existing data and evidence that validates current online service delivery practices in public organisations. It further elaborates on e-governance, which is the adoption on Information and Communication Technologies in public service. The chapter further argues that relationship exists between service organisation value chain, online service enabling technologies adoption, and nation branding strategy.

1.9.2 Chapter three: Underpinning Theory

Based on the literature review, Chapter 3 elaborates on the underpinning theory. Online business registration being intended by the government to make support services available to entrepreneurs and making services nearer to the citizens, has

been looked at as e-governance; through which the phenomenon was studied. The underpinning was Technology Acceptance Theory (TAT) based on evidence pointing the government usage of Information and Communication Technology (ICT) to ease the strenuous processes involved in manual operations. In line with lean organisations, resultant benefits of thereof namely increased efficiency, effectiveness and improved service delivery were perceived not only as re-branding efforts; but as framework that facilitated the understanding and interpretation of the social phenomenon.

1.9.4 Chapter four: Research approach

Chapter four delineates the research design and methodologies that were applied in this thesis. Considerations such as the research design and sampling techniques, procedure, and methodologies that were used to collect and analyse the data were discussed in this chapter.

1.9.5 Chapter Five: Data Analysis and Interpretation

Chapter five documents the results of the survey conduct, as well as analysis and interpretation of data collected. The objective of this chapter was to conduct a comparison of the study's empirical results with existing literature and theories regarding the thesis topic. The Chapter also presents the arguments for online business registration adoption to re-brand DTI Congo-Brazzaville.

1.9.6 Chapter Six: Conclusion

This chapter discusses the main finding of this research and brings together the results from previous chapters. The chapter further clarifies how the results and conclusions relating to the literature and theory in the domain of online service delivery and organisation re-branding helped in the proposed normative model.

1.10 CHAPTER SUMMARY

This chapter introduces and presents the background and purpose of the study as well as a reference to preliminary investigations, which influenced the researcher's understanding of online business registration adoption for re-branding the DTI Congo. The country is known for being at the bottom of the pile when it comes to the ease of doing business ratings. These findings are cause for concern especially as there is

growing awareness that Congolese business' inability to compete in a fiercely competitive international economy spells ruin. Despite resultant benefits namely increased efficiency, effectiveness and improved service delivery that offer e-governance in making services near to citizens and easing the strenuous processes involved in manual operations, not all managers at the DTI Congo advocate the adoption of online business registration system. The problem is that insufficient advocacy of online business registration enforces the void of re-positioning the organisation vis-à-vis its internal customers (employees) as lean and innovative.

Figure 1.1 illustrates conceptual framework that was formulated to garner research problem. It is arguable that this framework intends to organise the inquiry but cannot provide explanations for, or predict, behaviour and outcomes of online business registration system at the Government Department of Trade and Industry (GDTI). Explanation and prediction lie in the realm of theories of the technology acceptance. The intent behind developing this conceptual framework in Figure 1.1 is that it could lead to new engagement: online service delivery at the GDTI.

The overall research question is: how does the DTI Congo-Brazzaville intend to improve business registration using online business registration as a branding tool? The main objective therefore was to propose the adoption of online business registration model for re-branding DTI Congo-Brazzaville. Based on research questions and objectives, hypotheses were drawn to test for statistics significance.

Care has been taken to delineate that this study is about online business registration for legal operations aimed at reducing value chain cost, fast-tracking tax payment at DTI Congo. However, it is not about registering a business to protect the rights of online buyers from fraud during shopping online by making a compulsory for online seller to register their business with companies like Paypal, SenangPay and many others that work as merchant banks.

Despite the growing interest in the use of information and communication technologies (ICTs) to improve service delivery and re-brand public sector organisations, there is little academic marketing literature attempting to explore the potentials of an online business registration platform as a re-branding tool. Organisations with strong brand

built familiarity between service delivery processes and employees. That familiarity focuses on resource allocation in the consultation process, service standards, information access, courtesy, openness, transparency and value for money. Thus, countries which have adopted online service in public organisations, not only that the adoption re-branded them as business or tourist destinations; but more importantly enabled employees to track customer data more easily, increased productivity in a way that reduces weekend work and over-time.

Online service delivery system would embed guest blogging, social media interaction, content networks, behavioural targeting and re-messaging to re-position the organisation as innovative in the mass level. However, developing effective graphics and visual representations of the brand are insufficient in themselves for re-branding public service organisations. The reality within the organisation requests that the employees' attitudes and behaviours towards new technology have to be in line with the brand values projected.

Whether in the public or not-for-profit sectors it is not uncommon for the product offering to be an idea, a cause, or a service. Using the Internet to promote these intangible offerings can often be challenging. However, the Internet enables both sectors to make the delivery of intangible product or service more efficient and effective. Given the above, the backbone of public service organisation re-branding is in the individual level of every employee. Public service organisations should use internal marketing to communicate brand values among employees. In so doing, they motivate, encourage their internal team to better understand the corporate brand identity and improve commitment, enthusiasm and consistent behaviour in service delivery.

Branding is senior management team initiative. However, in some organisations, branding fall under marketing and communications functions. In such case, when marketers leave the organisation, the branding initiative would lose momentum because the senior management team had not bought into the branding initiative. Andreasen and Kotler (2003) share the view that momentum in branding should start from senior managers. The rationale is to keep enthusiasm and support of branding strategy even when marketers leave the organisation. Arguably, not only does senior

management play a key role in branding strategy, they also need to be made aware and understand that branding is a long term process that requires long term commitment.

Proposing online service model which integrates branding strategy would be much easier when employees are committed to the goals of the organisation. Highly motivated and satisfied employees are pre-disposed to engage in the organisation re-branding process. Many public service organisations focus all their branding efforts on marketing activities such as advertising campaigns and packaging, yet one of the most powerful brand assets the organisation has is the employees. Indeed 41% of managers in public service organisation in South Africa believe that employees are the most credible source of information regarding business operations. When a citizen interacts with one of the frontline employees, brand promises stated in public relations communications and marketing departments are put to the test.

Thus, strong corporate re-branding efforts should consider employees as brand ambassadors who are thoroughly engaged, motivated, empowered, satisfied with working their conditions, connected and committed to deliver effective and efficient service in innovative way. Given the above-mentioned discussion, this research contributed theoretically, methodologically and the practically to the body of knowledge.

This led to the epistemological stance of the research to a combination of deductive and inductive reasoning in the case study methodology. Based on the conceptual framework, derived from the lenses of e-governance to tease out the problem, a mixed data collection method of observation, focus group and questionnaire was adopted. Probability sampling was used for a sample size of N=260 DTI Congo full-time employees from a total of 800. The data received from respondents were codified, analysed and interpreted in SPSS 22. All ethical considerations were established with regard to data collection.

It was envisaged that in addition to addressing the research questions and meeting the necessary objectives, focus should be turned to further intellectual discourse in **Chapter Two: Literature review.**

CHAPTER TWO LITERATURE REVIEW

2.1 INTRODUCTION

The first chapter provided an introduction and some background to the understanding of the need for an online business registration system adoption for DTI Congo re-positioning and re-branding. The chapter also outlined the problem statement of the study, the research questions, and the underpinning objectives. It was argued that the adoption of online business registration has the potentials to re-brand and position DTI Congo as lean organisation. The chapter also provided an overview of the significance of the research, sources of research data, research methodologies and the ethical consideration in data collection and the rest of the thesis.

This chapter summarises the review of current and relevant research work and literature in the area of value chain in service processes, service marketing, re-branding and re-positioning and e-governance. The chapter discusses literature on online business registration and its impact on service delivery by Government departments with the weaknesses of DTI Congo in mind.

The review focused on gaps in literature and the relevance of the application of e-governance concepts in addressing them. In view of this position, the chapter discusses the following themes:

- 1. Online business registration branding DTI South Africa,**
- 2. Online business registration and organisation re-positioning,**
- 3. Online service delivery and organisation re-branding,**
- 4. Value chain and online business registration,**
- 5. Public service organisation's competitive advantage in Congo,**
- 6. Service marketing and electronic channels,**
- 7. E-governance benefits and challenges in service organisation,**
- 8. The impact of e-governance on nation branding,**

2.2 ONLINE BUSINESS REGISTRATION BRANDING DTI SOUTH AFRICA

Various governmental organisations including DTI of South Africa acknowledge that online service adoption brings public services close to citizens and re-brands the nation as investment destination (Kluwer, 2016), but most importantly enables employees to track customer data more easily, increases productivity in a way that reduces weekend work and over-time (Metric Marketing, 2017).

Successful result of online service adoption at DTI South Africa is well documented as an inspirational example for ease of doing business in the country (DTI South Africa, 2017). Indeed, online business registration is one of the factors ranking South Africa 43rd out of 189 nations for ease of doing business, employees' productivity, motivation and job satisfaction (Doing Business, 2015). Early findings revealed online business registration steps at DTI of South Africa and summarised them in Table 2.1.

Table 2.1: Online business registration steps at DTI South Africa

Step	Activity
01	Log on to the DTI South Africa e-governance website
02	Register as customer
03	Pay required fees in the provided banking details
04	Login as Customer
05	Select New Company option
06	Add Company Details
07	Add Incorporator Details
08	Add Initial Director Details
09	Add Auditor Details
10	Add Company Secretary Details
11	Click Register Company to print business registration permit

(Source: Company and Intellectual Property Commission (CIPC), 2014)

Compared to South African experience, Bharati and Chaudhury (2006:88-89) argue that the current status of online business registration in the USA reduced operating costs of the business registrar and improved working conditions (Shopify, 2017). Similarly, EU countries have enabled online application within all governmental

departments where service organisation employees receive electronic applications of business registration application, tax declaration, customs declaration, thus saving them time in the process (Shopify, 2017).

Furthermore, online business registration has been adopted at the government department of trade and industry as driver to reduce value chain cost of service process in India. Bharati and Chaudhury (2006:88-89) observed that online service delivery in India became part of online service 70-70-70 business strategy between Indian and American governments. The 70-70-70 business strategy indicates that American government mandates the outsourcing of 70 per cent of its IT service requirements, of which 70 per cent is given to Indian strategic suppliers, who in turn execute 70 per cent of the work in India, and deliver finished products to American government via the Internet (Bharati, 2005:71-75).

More than that, other research undertaken by Al-Qirim and Bathula (2002:537-540) about the role by online service adoption at the New Zealand reveals that online service delivery adoption re-branded and re-positioned public service organisations, improved communication, nature of the work, potential personal growth, job conditions, policies and procedures, security and supervision (Better Business Bureau, 2014). Al-Qirim and Bathula (2002:537-540) findings conclude that online business registration plays a significant role in New Zealand's economy owing to the country's geographical remoteness from the rest of the world. Thus, regardless of various constraints related to resources facing the country, online service was catalytic up to 35 per cent of the country's GDP.

Given the above and drawing from Goi (2012: 2435), arguably quality website design, development and the take-up are positively related; as it is the case of the above-mentioned nations. Similarly, one can argue that the fundamental structure of online service system would require coherence of potential behavioural norms, communication, and teamwork skills, expertise, creativity and knowledge from the employees of service organisation (Ciborra, 2005). It is argued by Zou and Ghauri (2010) and Wolverton (1994:29) that re-branding and re-positioning public service organisation to deliver services electronically requires teamwork and skills. These should be based on four factors namely online service system planning, design and

development, management and maintenance and security and privacy. Therefore, online business registration and service performance would be related to internal, market and competitive factors (Goi, 2012: 2436; Willard, 2007).

Ciborra (2005) is of the view that employees and time would play a catalytic role for successful online service adoption in an organisation. Thus, from a positioning perspective, it means that employees in the public service organisation should tend to adopt the system and as such, the organisation should become dynamic. Based on ground observations, the first challenge of online interactivity adoption in many governmental agencies in some under-developed economies is the absence of the system itself. The next section elaborates on the effects of online business and organisation re-positioning.

2.3 ONLINE BUSINESS REGISTRATION AND ORGANISATION RE-POSITIONING

Positioning outlines what an organisation should do to market its services to the target audience. Public service organisations in general are already positioned in a certain way. However, re-positioning refers to the major change in positioning. Successful organisation re-positioning requires to change the way services have been being offered (Small Business Chron, 2017). Thus, online business registration adoption is one of the tools an organisation can use to re-position and improve employees' working conditions, communication, personal growth, business policies and procedures, security and supervision (Better Business Bureau, 2014).

Public organisation employees' abilities to engage in re-positioning efforts via online business registration adoption would prompt them to develop specific competence (Ciborra, 2005). In the process, adequate application of online business registration adoption would generate positive outcomes. Figure 2.1 illustrates outcomes that would be generated by online business registration adoption for re-positioning.

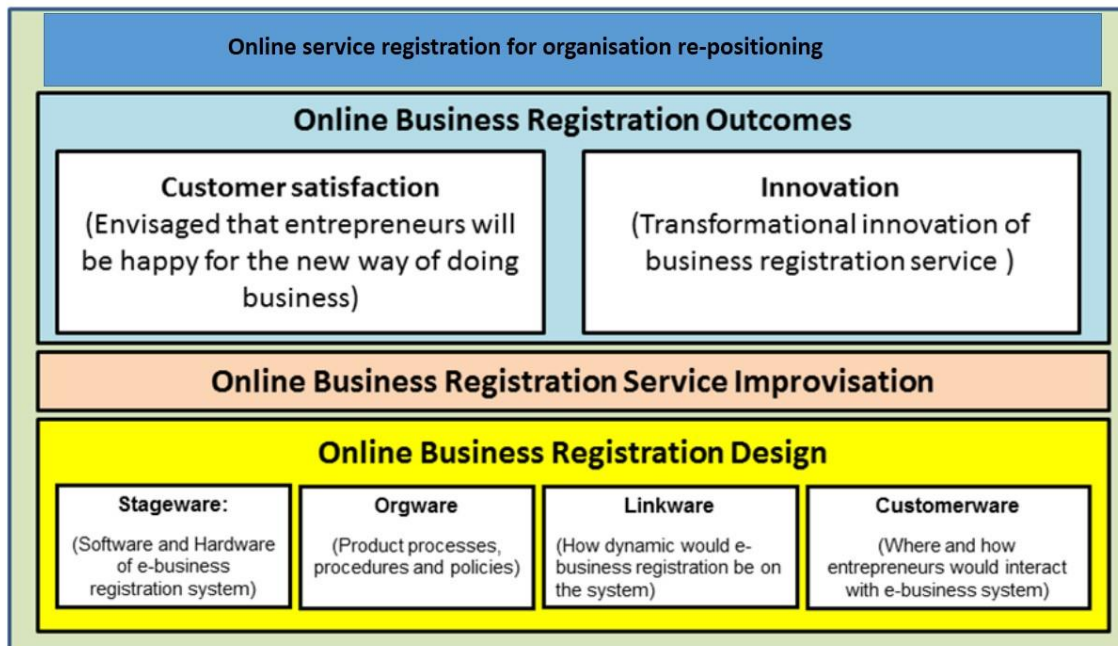


Figure 2.1: Online business registration for re-positioning

(Source: Voss, Roth & Chase, 2008).

It is argued that designed online business registration system proposed to an organisation should include Stageware, Orgware, Linkware, and Customerware. Hsieh and Yuan (2010) argue that Stageware includes the physical setting of the online business registration system, which would play an important role in shaping service employees' perception on the new system of delivering service in innovative way (Hsieh & Yuan, 2010).

Orgware refers to the service organisational management system, including the business process, policies, and the procedure in place. One believes that Orgware would play an important role in the setup of a rewards structure that would shape employees' performance. Furthermore, Linkware choices would concern the responsiveness of online business registration systems in improving service delivery and re-positioning the organisation. Customerware would represent alternatives about where and how entrepreneurs would manoeuvre the service delivery system, namely online business registration system for re-positioning as illustrated in Figure 2.1 (Voss, Roth & Chase, 2008). The following sections discuss in detail the specific characteristics of each stage.

2.3.1 STAGEWARE

Stageware refers to the physical aesthetic setting that signals how the online business registration service would take place (Voss, Roth & Chase, 2008:247-248). The necessary software and hardware for the online business registration system development, and operations would be highlighted. However, this set of choices not only includes the design layout of premises such as electrical power supplies, furniture, air-conditioning, sanitation, safety standards, wall paint and decorations, but also online service technologies (Shopify, 2017).

2.3.2 ORGWARE

Orgware refers to the organisation's management systems, policies and business registration procedures in place (Voss *et al.*, 2008). For example, the structure of the organisation, Human Resource (HR) practices, employees' incentives, hiring, training, documentations requested for new business registration in the country and business registration fees are part of Orgware. Voss *et al.* (2008:250) argue that Orgware design for an online business registration service should reward proactive behaviours focused on problem solving. Melhem (2004:73-75) argues that there is positive association between employees' empowerment antecedents such as trust, incentives, information, knowledge and efficient online service delivery.

Customer-contact employee empowerment in a customer-focused organisation would involve delegation of responsibilities of business registration decisions to frontline managers. In so doing, generic decisions are made quickly by the contact personnel without interference of higher levels of hierarchy (Melhem, 2004:74). Although empowering employees of an organisation would be necessary to engage in online business registration adoption, simple delegation of decisional responsibilities would not itself be sufficient for the organisation to add value in the process. It can therefore be argued that human capital of the online business registration system should be developed. Improving employees' skills and knowledge in the area Information and Communication Technologies (ICTs) could form part of customer-contact employee empowerment.

Online business registration system adoption would rely on employees' ability to utilise Information Systems (IS) resources, which would enable the organisation to migrate

from offline to online service delivery. Such IS ability would be positively related to employees' knowledge of the online business registration process itself. Thus, better understanding of the industry would constitute the ultimate stick-yard on which organisations can re-position. (Shopify, 2017).

However, it is arguable that an organisation that relies on an online business system for improved service delivery can increase human capital either internally (employee development), externally (staff outsourcing) or by a combination of both. Goldstein and Ford (2002) argue that employees' development and training would significantly enable better use of the potential online business registration service. Similarly, hiring employees with extensive experience in business strategy, computer networks, website design, and development would likely increase their ability to adapt and better achieve the desired results. The next section elaborates on the Linkware design choice.

2.3.3 LINKWARE

Linkware concerns the model of online business registration system that would be adopted (Voss *et al.* 2008:251). Once adopted, an online business registration system should facilitate coordination and information exchange between public organisations and citizens or businesses. Drawing from Voss *et al.* (2008), it can be argued that the rationale of Linkware would be to improve employees' working conditions, communication, personal growth, business policies and procedures, security and supervision (Better Business Bureau, 2014), but most importantly enable employees to track customer data more easily, increase productivity in a way that reduces weekend work and over-time (Metric Marketing, 2017).

Linkware as an integration platform would be more concerned with how dynamic and interactive the online business registration system would be. The free flow of data would play a crucial role in the successful use of that potential online business registration system. For example, without secured platform, the system might become more static online than offline. The availability of security measures would reinforce the accessibility of an online business registration system, therefore re-positioning the organisation. The next section discusses customerware that shares similarities with Linkware.

2.3.4 CUSTOMERWARE

Customerware includes the set of choices about where and how online service users would interact with service provider (Voss *et al.*, 2008:251). Such interaction could be enhanced by the online service design appeal, its dynamic functionality and around the clock responsiveness. The characteristics of the encounter would be directly shaped by the employees' ICT knowledge. Hsieh and Yuan (2010) argue that customer-focused online service adoption is critical in enabling service organisation to deliver quality service.

However, it is recommendable to lay down ahead of time an online business registration system performance evaluation programme. Various scholars have criticised performance evaluation programmes in the service industry. Won-Moo and Minsung (2014:523) argue that the more detailed the performance evaluation programme, the more the service employee can operate mindlessly. In addition, Tyagi and Gupta (2013:10-11) posit that following the performance programme closely would make employees less receptive to disruptive inputs, which is one of the causes of service failures.

Other scholars elaborated on the relationships between performance programmes and employee's performance in the service industry (Victorino, Bolinger and Verma, 2012:6-7). Excessive performance control of online systems could hinder employees' performance, undermines creativity, and increases standardisation. Yet, Sillanpää (2011:62) anticipates the rise and fall of strategic planning and argues that excessive reliance on planning and control in the process of online service would result in a discrepancy between the intended and realised organisation re-branding strategies.

Potentially, online business registration adoption would not just enable service employees to track customer data more easily, increased productivity in a way that reduces weekend work and over-time (Metric Marketing, 2017); but bring about entrepreneur satisfaction and transformational innovation. Both satisfaction and transformational innovation are the main value chain drivers in online business registration system adoption (Ellinger, Shin, Magnus, Frank, Debra, & O'Marah, 2012:249). Similarly, the experimental nature of online business registration adoption activities would transform the institution from "self-centred" to "market" or "learning

organisations” based on “lean principles” (Shamah, 2013:18). Further analysis of innovation and entrepreneur’s satisfaction are discussed in the next subsections.

2.3.4.1 TRANSFORMATIONAL INNOVATION

Aaker (2015) argues that there are three types of innovations namely incremental, substantial, and transformational. Incremental innovation has noticeable impact on the organisation and substantial innovation is an offering enhancement. Transformational innovation changes the basic offerings in a way that previous product features becomes obsolete to the segment. From the above, online business registration system adoption would be transformational innovation hence it brings organisation’s systems from computerization into a new level of online interactivity with citizens; while improving employees’ working conditions, communication, personal growth, business policies and procedures, security and supervision.

Given the right conditions, online business registration adoption would position the organisation by improving service delivery and transforming the entire business registration process, in the case: DTI Congo (Choo & Johnston, 2004:78). It is arguable that the potential success of online service adoption in creating new knowledge would have a positive long-term effect on the public service organisation landscape. However, a country’s sustainable competitive advantage would depend on the government departments’ perception of the innovation and its ability to embrace this new knowledge in nearing public service delivery to citizens.

2.3.4.2 ENTREPRENEUR’S SATISFACTION

Within an organisation, the performance of service delivery is positively related to the expectation paradigm (Zeithaml, 2002:135-139). According to Zeithaml (*ibid*), satisfaction is measured as the gap between service delivery that is expected and entrepreneur’s perception. Indeed, the higher service organisation ability to meet or exceed expectations, the higher satisfaction. Service organisation’s ability to adapt and respond to new market dynamics can lead to a sustainable competitive advantage. Online business registration adoption would break trade-offs between business operations cost and quality service delivery (Kim & Kim, 2010:69-70). For effective and efficient online business registration service in a country’s department of

trade and industry (DTI), the target market and the service delivery system should be aligned. Re-branding an organisation translates into creating positive expectations of reward from the service; however, positioning establishes a brand preference. Even though re-positioning public service organisation is less relevant than re-branding because of the characteristics of public service namely uniqueness and mandatory, further discussions about re-positioning still opens new vista as online service delivery has evolved significantly (Shopify, 2017).

2.4 ONLINE SERVICE DELIVERY AND ORGANISATION RE-BRANDING

Various definitions of branding are documented. Brand can be define as distinctive identity of a product which the end-user can identify with, or a promise of consistent predictable quality, value and reliability (Shopify, 2017). Ellwood (2001) argues that brand is quantifiable, long-term strategic marketing process of building and overseeing the perceived value of service delivery.

Drawing from Travis's (2000:20) brand definition, it is agreeable to differentiate branding from advertising for further intellectual discourse. The reason is that the concepts are often confused, yet they are essentially two different disciplines. Brand combines and reinforces the functional and emotional benefits of the offering, adding value, encouraging consumption and loyalty. However, advertising concentrates on one of the brand's target: customers; and is aimed at making them aware of its products and services, and persuading them to buy these products and services.

Etymologically, the word "branding" originates from the Scandinavian word for burning: *briinna* and the Swedish word for fire is brand. Literally, brand means to bum a mark on something; similar to a brand-mark put on cattle with a hot iron (Nilson, 1999:57). Historically, the Egyptians used fire to print their names on the bricks of pyramid floors (Travis, 2000:23). The ancient Romans and Greeks used fire to print "maker's marks" on selected products (Ellwood, 2001:12). Keeping in mind that any product or service can ultimately be copied, but a brand cannot; the above-mentioned efforts of branding could be regarded as an organisation's promise of consistent predictable quality for a successfully differentiation.

2.4.1 BRAND PERSONALITY IN THE SERVICE INDUSTRY

Although the principles for branding of goods and services are generally the same, there are however some differences when branding services. These differences arise from the different natures of both categories. The main difference is that when branding services, customers have to be actively involved in the consumption of services, which are hard to visualise and yet have changing level of quality (Smart Marketing, 2012). Service organisation with strong brand personality anticipate on the above-mentioned differences, especially on the changing nature of quality in service delivery industry.

Theories of brand personality dimensions were developed and widely accepted. Brand personality is often associated to brand image to improve service delivery (Forbes, 2005). Brand personality dimensions include corporate image, personality and performance (effectiveness and efficiency in service delivery) (Hayes, 2000). From service organisation's employee perspective, it is agreeable to stress that brand personality is the category of traits employees perceive from corporate performance (Andreasen & Kotler, 2003).

However, Liu Yong (2008) argue that internal marketing dynamics is one of the main reasons for corporate re-branding strategies in public service organisations. As such, re-branding efforts focus on improving employees' working conditions, job satisfaction, communication, motivation, personal growth, business policies and procedures, security and supervision. Major corporate re-branding attributes of online service delivery are competence, strength and sincerity enabling service employees to track customer data more easily, increase productivity in a way that reduces weekend work and over-time.

2.4.2 ONLINE SERVICE DELIVERY AS NATION BRANDING STRATEGY

Generally, there are mythological concepts which brand countries accordingly. National anthems, symbols, currency, victories of wars and names the few. For example, USA is well-established brand as nation winning wars in the 21st century by leading military interventions in Yougoslavia, Irak and Yemen (Skodra, 2010:1). Nation branding encompasses activities from country naming through to all the collected activities such as ease of doing business enabling competitive reputation of a nation and corporate brand image of public organisations within the country (Msele, 2007).

Online service delivery adoption in public service organisations in general, and at the government department of trade and industry could be perceived as nation branding tool for conducive environment for businesses among 195 competing nations on earth (Mugobo & Wakeham, 2014). The principles of branding utilised to market products and services can also be applied for country. Drawing from the work of Cromwell (2008) various countries namely EU state members, USA, China, India, New Zealand and South Africa have promoted their image as investment destination through the establishment of online service delivery systems connecting citizens on a 24- hour and 7-day basis.

According to O'Shaughnessy and O'Shaughnessy (2000:56), any nation on earth can be viewed as a brand. Lee (2009:1) argues that nation branding is about creating resources to sustain both citizens and business for competitiveness. Within EU state members, USA, China, India, New Zealand and South Africa, online service delivery adoption enabled business registration, tax declaration, birth registration, court proceedings, crime report, biometric identification and digital signature. The above-mentioned infrastructure represent much needed resources to re-brand a nation as an investment destination (Cap Gemini, 2006:5-14).

Nation brand can be developed by default, formed from a myriad of different sources such as word of mouth, education, mass media (social networks), travel, product purchases, service delivery and the way government interacts with its citizens (Vatahov, 2006). Increasingly, nations around the world are migrating from traditional to online service delivery to re-brand and re-position themselves on the world stage and attract businesses (Domeisen, 2003). A power house information nation would earn credits of the international community as leader in information society, promoting ICT-based and environmentally-friendly infrastructures.

2.5 VALUE CHAIN AND ONLINE BUSINESS REGISTRATION

Competitive advantage in public service organisation cannot be achieved by looking at the organisation as a whole. According to Porter (2001) organisation's competitive advantage would stem from various activities they perform in the product process. Efforts to improve employees' working conditions, communication, personal growth, business policies and procedures, security and supervision focusing on online service

enabling technologies which can track customer data more easily is a source of competitive advantage.

Either public or private organisation, operations requirements from business registration, product design and production, marketing, delivery to customer support constitute cost position strategy (Porter, *ibid*). A cost advantage would derive from public organisation’s centralised online service transactions from business registration to internal marketing (employees) and customer support. Figure 2.2 illustrates the contention of value chain, competitive advantage and online business registration from value chain primary and support activities (Porter, 1998).

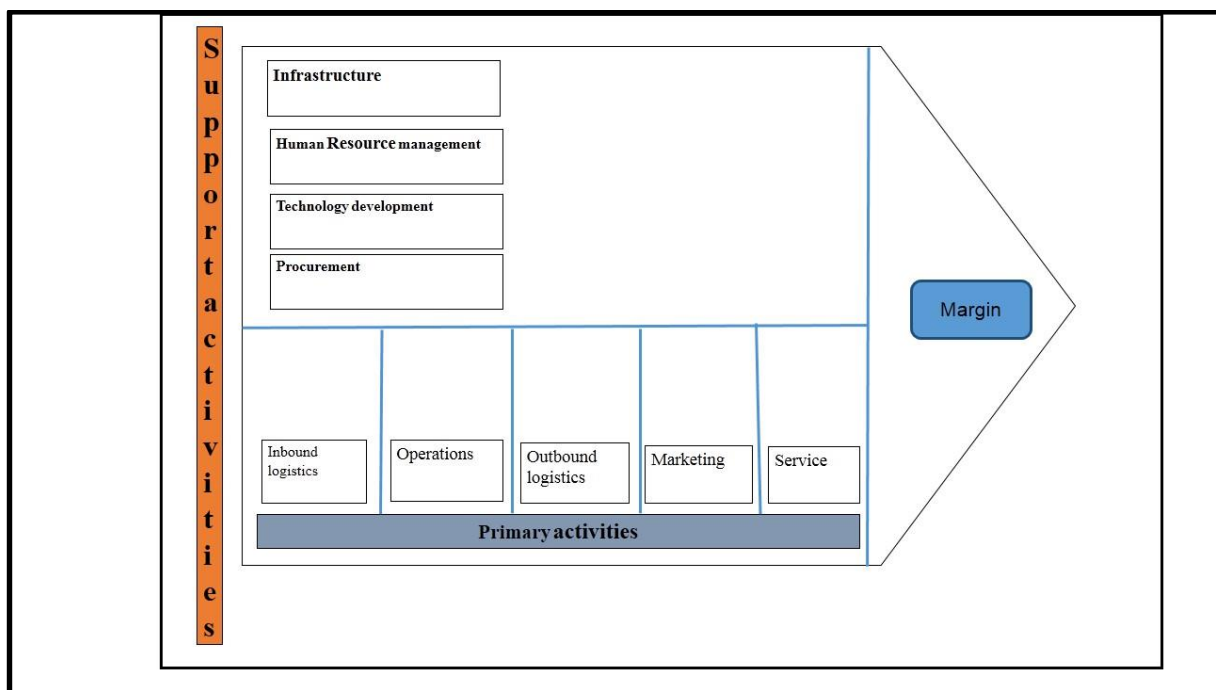


Figure 2.2: Online business registration value chain

(Source: Martin, 2005)

Martin (2005) argues that public service organisation value chain is divided into two main activities namely primary and support. Inbound logistics, operations, outbound, marketing, and service fall under primary; while infrastructure, human resource management, technology, and procurement represent support activities. Figure 2.2 refers to that system which starts from business registration service. The service will be accessed electronically via an online system that enhance service delivery. As

such, the registration office represents an upstream value chain with potentials to add value in the process, improve working conditions, increase employees' job satisfaction and motivation and deliver quality service to the entrepreneurs. In so doing, the registrar not only delivers service in innovative way, but also re-positioned itself in the mind of its internal customers (employees) as lean and innovative organisation.

Thus, primary activities being important features and foundations of online service delivery system, value chain for the organisation re-branding efforts are organised and coordinated efforts to exceed expectations.

2.6 PUBLIC SERVICE ORGANISATION'S COMPETITIVE ADVANTAGE IN CONGO

Table 2.2 demarcates four types of competitive advantages and suggests *conservative-relational competitive advantage* as main reason to re-brand public service in general, the business registrar in particular (Kahl, 2013). Such fundamental match is based on the fact that *conservative-relational competitive advantage* is achieved when a new service delivery channel offers new service that delivers superior solution and simultaneously improve employees' working conditions, communication, personal growth, business policies and procedures, security and supervision.

Table 2.2: Types of competitive advantage

No	Competitive advantage	Way to achieve it
01	Conservative-transactional	Achieved through the offering of a quality standard product or service that is superior to that of competitor through excellence in production, distribution and logistics
02	Conservative-relational	Achieved through the offering of a new product or service combination that delivers a superior customer-specific solution
03	Entrepreneurial-transactional	Achieved through the offering of a new product or service delivering features and performance that is unavailable from standard good producers
04	Entrepreneurial-relationship	Achieved through the offering of product or service that has been developed in partnership with the customer and in so doing contributing towards the ability of customer to launch new, innovative products and services.

(Source: Martin, 2005)

From the above, it is agreeable that adding value in the service delivery process by adopting online business registration system would be a way for business registrars in Congo to create *conservative-relational competitive advantage*. Primary activities of value chain are discussed next.

2.6.1 PRIMARY ACTIVITIES OF BUSINESS REGISTRATION

Recalling from Figure 2.2 above, it is arguable that in the brick-and-mortar business registration process, inbound logistics is associated with the receipt and dissemination of business permit application submitted by the customer (entrepreneurs). In the first step, receiving the certificate business permit application and forwarding it to the appropriate directorates would be a good illustration of inbound logistics in the value chain from the registrar. During the second step, which is operations, the relevant directorate at the registrar office is concerned with inputs evaluation, which would determine whether the output is satisfactory, or not.

The third step of outbound logistics consists of storing granted business permit, and collection and distribution of the outcomes. The fourth step, which is related to the marketing activities of the registrar, would be associated with the availability of front office staff to help customers in collecting the outcomes. When customers come to inquire for the outcomes, front office staff inform applicants whether the certificate has been granted or not. If it was denied, they friendly explain the appeal process and the way in which customers could acquire the product (business permit).

The fifth and final step of primary activities in Figure 2.2 refers to service. It is the total productivity training associated with rendering of service in order to enhance and maintain the value of the service and the image of the registrar. Hence, infrastructure, human resource management, technology, and procurement are the bedrocks of support activities in the value chain.

2.6.2 SUPPORT ACTIVITIES OF BUSINESS REGISTRATION

In Figure 2.2, the researcher argues that the support activities of the registrar include infrastructure, human resource management, technology and procurement (Saha, 2015). Saha (*ibid.*) argues that infrastructure includes service processes, procedures, and policies (PPP) which are related to Congo's business registration legislation.

Human resource management supports the entire business registration value chain from recruitment, training, level of skills, employee motivation to compensation and this affects the competitive advantage of the registrar. Further, technology comprises of activities such as research and development and design and servicing procedures that improve business registration service delivery. Technology would embody every value activity whether it is “*know-how*” or an online business new system. Finally, procurement refers to the function of the registrar’s input acquisition: the purchase of stationery, computers, printers and online service technologies. Croom, Romano and Giannakisa (2000:68-69) argue that business registration is not merely a set of independent activities, rather a collection of interdependent ones. Such interdependence could be in the *primary-primary level*, e.g. inter-sectional and co-ordination; or in the *primary-support level*, e.g. data capturing and business support (Coelho, 1999).

From Coelho’s (1999) analysis of service organisation’s value chain and cost leadership strategy, the researcher argues that internal linkage between primary and support activities could not be efficient. The reason is that within primary activities; customers should not only be satisfied but also be able to derive value from the manner in which business registration service has been rendered. The above meant that in the cities like Pointe-Noire, where literally the concept of physical address is not enforced, the choice of the Internet to induce electronic channels in service delivery became imperative.

2.7 SERVICE MARKETING AND ELECTRONIC CHANNELS

2.7.1. Introduction

Services are intangible as opposed to products and can be regarded as deeds, processes and performances. From the above, a service can be defined as: *all economic activities whose output is not a physical product or construction, is generally consumed at the time it is produced, and provides added value in forms (such as convenience, amusement, timeliness, comfort, or health) that are essentially intangible concerns of its first purchaser* (Zeithaml & Biner, 2016).

Considering the growth of the service industry, service organisations learnt that marketing and managing services present many challenges. Marketers of tangible goods recruited into service industries realise that their skills could not be directly transferred. Thus, marketers and service organisations realise the need for new approach in managing services.

Information Technology (IT) has shaped service marketing in organisations. Such influence creates potentials for new service offerings, new way to deliver service, improving internal and external communications and extending the global reach of the service. Table 2.3 indicates characteristics of service impacting on marketing activities.

Table 2.3.: Characteristics of service marketing

No:	Characteristics	Description
01	Intangibility	Services are actions or performances rather than objects and as a result cannot be seen, felt, tasted or touched.
02	Heterogeneity	This characteristic results in outcomes of services, which are essentially produced by human beings, differing.
03	Inseparability	This characteristic results in the service being produced and consumed at the same time with the customer being the co-creator of the service experience.
04	Perishability	This refers to the fact that services cannot be saved, stored, resold or returned. This creates the challenge of being able to match demand with supply so that capacity is not underutilized resulting in lower profits or turning customers away when demand exceeds supply.
05	The Services triangle	The Services triangle is a strategic framework that illustrates three interlinked groups that must work together to develop, promote and deliver service promises. The organisation or management must interact with employees to enable the service promise. The company or management must interact with customers so that service promises can be communicated.

(Source: Zeithaml *et. al.*, 2016)

Against the above background, service marketing mix includes people, physical evidence and process. The people element refers to all human actors who play a part in the service delivery, the physical evidence element refers to the environment in

which the service is delivered and the process element refers to the actual procedures, mechanisms, and flow of activities by which the service is delivered.

2.7.2. Employees' role in service delivery

Employees' behaviour in an organisation is heavily influenced by the pervasive norms and values that shape individual and group behaviour. Corporate culture has been defined as 'the pattern of shared values and beliefs that give the members of an organisation meaning and provide them with the rules for behaviour in the organisation (Zeithaml *et. al.*, 2016).

A service-oriented organisation has and enforces service culture, which can be defined as a culture where an appreciation for good service exists, and where giving good service to internal as well as external customers is considered as norms by the employees (Word Numbers, 2017). People element also includes front-line employees whose impact is critical to the success of service organisation. Front-line employees are the service, the organisation's eye, the brand and the marketers of the organisation. Thus enforcing service culture based on employees' appreciation, motivation, improved communication among co-workers, improved working conditions and personal growth is a wake-up call for successful service delivery.

Relationships exist between employees' satisfaction, working conditions and organisation competitive advantage. It is argued delivering service in innovative way can, in turn, reinforce employees' sense of satisfaction in their jobs. Even in public organisation where most of the services are unique and mandatory, unless service-enabled technologies are adopted, job satisfaction will be difficult to achieve (Word Numbers, 2017). The service profit chain suggests that there are critical linkages among internal service quality; employee satisfaction; the value of services and competitive advantage.

Indeed employee behaviours have effect on service quality dimensions namely reliability, responsiveness, assurance, empathy and tangibles. Delivering the service promised (reliability) is often totally within the control of front-line employees. Front-line employees directly influence customer perceptions of responsiveness through their personal willingness to help and their promptness in the service process. The

assurance dimension of service quality is highly dependent on employees' ability to communicate their credibility and to inspire trust and confidence (Abubakari, 2016). Front-line employees in service culture organisations should enforce empathy. Empathy implies that employees will pay attention, listen, adapt and be flexible in delivering quality service. Employee appearance and dress are important aspects of the tangibles dimension of quality, along with many other factors that are inter-related to front-line employees.

Indeed front-line employees, also referred to as "boundary spanners", operate at the organisation's boundary. Boundary spanners provide a link between the external customer and environment and the internal operations of the organisation. They serve a critical function in understanding, filtering and interpreting information and resources to and from the organisation and its external constituencies. Nevertheless, boundary-spanning positions are often high-stress jobs because they require extraordinary levels of emotional labour, frequently demand an ability to handle interpersonal and inter-organisational conflicts, and call on the employee to make real-time trade-offs between quality and productivity on the job. These stresses and trade-offs can result in failure to deliver in emotional labour, which widens the service performance gap (Abubakari, 2016).

The term emotional labour was coined by Hochschild to refer to the labour that goes beyond the physical or mental skills needed to deliver quality service (Batra & Lane Keller, 2016). In general, boundary spanning service employees are expected to align their displayed emotions with organisationally desired emotions via their use of emotional labour. Such labour includes delivering smiles, making eye contact, showing sincere interest and engaging in friendly conversations with potential customers. Friendliness, courtesy, empathy and responsiveness directed towards customers all require huge amounts of emotional labour from the front-line employees who shoulder this responsibility for the organisation.

Quality service delivery can become source of conflicts. The frustration and confusion of front-line employees caused by lack of innovation can lead to employees' stress and job dissatisfaction and burnout. For example, receptionists in a government department may perceive themselves performing roles that give them a status below

that of the customer (entrepreneurs). This is often described as a subordinate service role. They may feel that the customer has more control over their role than they do. As a result, some receptionists may develop their own approach to overcome the perceived inequality between customers and themselves (Batra & Lane Keller, 2016).

Preceding sections argue that front-line service employees are often asked to be both effective and efficient. That meant they are expected to deliver satisfying service to customers and at the same time to be cost-effective and productive in what they do. Proceeding sections elaborate on the service delivery technologies much needed for service organisations.

2.7.3 Strategies for delivering service quality through people

A complex combination of strategies is needed to ensure that employees in service organisation are willing and able to deliver quality services and that they stay motivated to perform in customer-oriented, service-minded ways. These strategies are often referred to as internal marketing. Building a customer-oriented, service-minded workforce, an organisation must hire the right people, develop people to deliver service quality, provide the needed support systems, and retain the best people (Chen & Yu, 2017).

Hiring the right people is crucial to deliver quality service effectively. However, considerable attention should be focused on recruiting and hiring service employees who are competent, competitive with conviction that the organisation is their preferred employer. *Developing people* to deliver quality service refers to growing and maintaining a workforce that is equipped with resources needed to innovate. From the above, one can argue that once the organisation has hired the right individuals, the organisation should train and work with these employees to ensure service performance. The training should focus on technical and interactive skills, employees' empowerment and team work (Chen & Yu, 2017).

Providing much needed support systems would enable employees to be efficient and effective in their jobs, hence service workers require internal support systems that are aligned with their need to be customer focused. As such, the system should measure internal service quality, provide supportive technology and equipment and develop

service-oriented internal processes (Chen & Yu, 2017). *Retaining the best people* is a mission for service organisation that hires the right people, trains and develops them to deliver service quality. Employee turnover, especially when the best service employees are leaving, can be detrimental to service process, employee morale and overall service quality. Employee retention should be in line with organisation vision, which should request to treat employees as customers, and measure and reward strong service performers. Challenges of service innovation are discussed next.

2.7.4 Service innovation design

The challenges inherent in service design are based on the characteristics of services that differentiate them from products. Services are variable as a result in differences between customers and service employees and their roles. Service cannot be inventoried and thus crated huge challenges in meeting demand during fluctuations (Randhawa & Scerri, 2017). New service development processes have its merits in adopting new technology. In general, employees over-estimate the value of they have and under-estimate the value of what they gain by giving that up. Hence, when adopting new technology for quality service delivery, employees and managers should be aware of stages in service innovation design indicated in Table 2.4

Table 2.4 Stages in service innovation

N0	Stage
01	Business strategy for development or review
02	New service strategy development
03	Idea generation
04	Concept development and evaluation
05	Business analysis
06	Service development and testing
07	Market testing
08	Commercialisation
09	Post-introduction service

(Source: Zeithmal *et al.*, 2016)

The service innovation is divided into two sections namely front-end planning and implementation section which are subsequently discussed.

2.7.4.1 Front-end planning

Front-end planning consists of business strategy development, new service strategy development, idea generation, concept development and evaluation, and business analysis. *Business strategy for development* is important to consider the overall strategic mission and vision of the organisation when adopting a new service innovation. It is important that the new service concept fits in with the organisation's current vision, mission and values. In the *new service strategy development* step, a service strategy would depend on the proposed organisational structure needed to implement the innovation, the intended target market of the new offering, as well as the decision to develop existing services or to implement a new service (Randhawa & Scerri, 2017).

The *idea generation* step is formal brainstorming, solicitation of ideas from customers and employees, which lead market research and learning about the offerings. The *concept development and evaluation* step is one of the most challenging steps for marketers as a result of the inherent characteristics of a service that differentiates from a product. Finally, in the *business analysis* step, the organisation involves in developing a demand analysis of the service, revenue projections, cost analysis and operational feasibility (Chen & Yu, 2017).

2.7.4.2 Service innovation implementation

Service innovation implementation consists of service development and testing, market testing, usage (commercialisation) and post-introduction service. In the *service development and testing stage* all stakeholders are involved to refine the service to such a point that the service blueprint is developed. In *market testing* stage, and in comparison to a product, test marketing has its unique challenges in that the new service is most of the time intertwined into a current service offering. In the *usage or commercialisation stage*, the service goes live and is formally introduced into the marketplace. Finally, *the post-introduction service* stage involves investigating data from customers and employees to fine tune the service blueprint to ensure that all

business objectives for the new service has a greater chance of being met. Electronic channels are discussed next.

2.7.5 Delivering services through electronic channels

The Internet has transformed every aspect of human lives, including how individual socialise, manage money, purchase goods and services, and gather information. Electronic channels have vastly expanded the opportunities for goods and services marketers to distribute their offerings (Chen & Yu, 2017). Electronic channels do not require direct human interaction however, they do require pre-designed service ICT platform and an electronic vehicle (Internet connection) to deliver it. Arguably, the more a service relies on technology for service production, the less it relies on face-to-face contact with service providers, thus; the less the service is characterised by inseparability and non-standardisation. Table 2.5 summarises the benefits and challenges of electronic distribution.

Table 2.5 Benefits and challenges of electronic distribution channels

N0	Benefits	Challenges
01	Consistent delivery for standardised services	Price competition
02	Low value chain cost	Inability to customise due to the standardised nature of electronic services
03	Customer convenience	Lack of consistency because of customer involvement
04	Wide distribution	Changes in consumer behaviour
05	Customer choice and ability to customise	Security concerns
06	Quick customer feedback	Competition from widening geographies

(Source: Zeithamel *et.al.*, 2016)

However, given the above challenges, service organisations have alternatives to hire agents and brokers.

2.7.6 Delivering services through agents and brokers

An agent is an intermediary who acts on behalf of a service principal or government department. Some agents, called selling agents, work with the principal and have contractual authority to sell a principal's output such as travel, insurance or financial services. Usually, when the service principal lacks the resources, they hire agents and brokers equipped with resources to deliver quality service on their behalf. Broadly, other agents, called purchasing agents, often have long-term relationships with buyers and help them in evaluating and making purchases (Zeithamel *et.al.*, 2016).

A broker is an intermediary who brings buyers and sellers together while assisting in negotiation. Brokers are paid by the party who hired them, rarely become involved in financing or assuming risk and are not long-term representatives of buyers or sellers. Agents and brokers do not take title to services but instead deliver the rights to them. They have legal authority to market services as well as to perform other marketing functions on behalf of the service principal. Table 2.6 summarises benefits and challenges of delivering services through agents and brokers.

Table 2.6 Benefits and challenges of delivering service through agents and brokers

N0	Benefits	Challenges
01	Reduced selling and distribution costs	Loss of control over pricing Representation of multiple service principals
02	Possession of special skills and knowledge	
03	Wide representation	
04	Knowledge of local markets	
05	Customer choice	

(Source: Zeithamel *et.al.*, 2016)

Despite the above challenges, service organisations still have alternatives to develop strategies to deliver quality service through intermediaries, which are discussed next.

2.7.7 Strategies for effective service delivery through intermediaries

It is acknowledged that service principals would want to manage their service intermediaries to improve service performance, re-brand, re-position and increase profits and revenue. The principal has a variety of choices, which range from strict contractual and measurement control to partnering with intermediaries in a joint effort to improve service delivery (Word Numbers, 2017).

Control strategy is one of the strategies to manage intermediaries. In the control strategy, the service principal believes that intermediaries will perform best when it creates standards both for revenues and service performance, measures results and compensates or rewards on the basis of performance level. To use this strategy the principal must be the most powerful participant in the channel, possessing unique mandatory service attributes with strong customer loyalty.

Control strategy is based on measurement and service review. In the measurement technique, agents and brokers maintain control of the service quality delivered by their franchises by ongoing measurement programmes that feed data back to the principal. However, in the review, franchisors control through terminations, non-renewals, quotas and restrictive supplier sources. Expansion and encroachment are two of the tactics being currently used. Other means by which franchisors exert control over franchises are quotas and sales goals, typically by offering price breaks after a certain volume is attained (Word Numbers, 2017).

Empowerment strategy is the second strategy that service principal can use to manage intermediaries. Within this strategy, the service principal allows greater flexibility to intermediaries based on the belief that their talents are best revealed in participation rather than acquiescence. It is recommended when the service principal is new and lacks sufficient power to govern the channel using control strategy. In empowerment strategies, the principal provides information and processes to support intermediaries. Empowerment strategy enables the intermediary develop customer-oriented service processes (Zeithamel *et.al.*, 2016). Individual intermediaries rarely have the funds to sponsor their own customer research studies or training programmes. One way for an organisation to improve intermediary performance is to conduct research and provide the results as a service to intermediaries. *Partnering*

strategy is the third strategy available for service principal to manage intermediaries. This strategy has highest potential for effectiveness involves partnering with intermediaries to learn together about end customers, set specifications, and improve delivery and communication. This approach capitalises on the skills and strengths of both principal and intermediary, and engenders a sense of trust that improves the relationship (Chen & Yu, 2017).

Partnering strategy enables alignment of goals, consultation and cooperation. One of the most successful approaches to partnering involves aligning company and intermediary goals early in the process because both the service principal and the intermediary have individual goals that they strive to achieve. However, a strategy of consultation and cooperation is not as dramatic as setting joint goals, rather, it does result in intermediaries participating in decisions. The principal makes a point of consulting intermediaries and asking for their opinions and views before establishing any service delivery policy (Chen & Yu, 2017). Delivering quality service underlines the issue of capacity-constraint, time, labour, equipment and facilities constraints owing to lack inventory capacity of services. These issues are discussed in the next sections.

2.7.8 Managing demand and capacity of service organisation

The fundamental issue underlying supply and demand management in services is the lack of inventory capability. Unlike manufacturing firms, service organisation cannot build up inventories during periods of slow demand to use later when demand increases. This lack of inventory capability is due to the perishability of services and their simultaneous production and consumption. It is argued that the lack of inventory capability combined with fluctuating demand leads to a variety of potential outcomes. However, there are four basic scenarios that can result from different combinations of capacity and demand: excess demand, demand exceeds optimum capacity, demand and supply are balanced at the level of optimum capacity and excess capacity (Randhawa & Scerri, 2017).

2.7.8.1 Capacity constraint

In service organisations, service capacity is pre-defined. Depending on the type of service, critical fixed capacity factors are time, labour, equipment, facilities or a

combination of these. For some service organisations, the primary constraint on service delivery is time. From the point of view of a firm that employs a large number of service providers, labour or staffing levels can be the primary capacity constraint. In other cases, equipment may be the critical constraint (Randhawa & Scerri, 2017).

Understanding the primary capacity constraint, or the combination of factors that restricts capacity, is a first step in designing strategies to deal with supply and demand of services. To fully understand service capacity issues, it is important to elaborate on the difference between optimum and maximum use of service capacity. Using service at an optimum level means that resources are fully employed but not overused; and that customers are receiving quality service in a timely manner. Maximum service capacity usage on the other hand represents the absolute limit of service availability (Randhawa & Scerri, 2017).

2.7.8.2 Service demand pattern

Researchers argue that before managing fluctuating demand in a service organisations, it is necessary to have a clear understanding of demand patterns, why they vary, and the market segments that comprise demand at different points in time. Service demand pattern includes recording, predicting, random fluctuation and pattern by segments (Abubakari, 2016). Service organisations should record the level of demand over relevant time periods. Arguably, organisations that have good computerised customer information systems can record this information accurately. Thus, when managers review the graphic representation of demand levels, predictable cycles may be detected, including daily, weekly, monthly and yearly. However, sometimes the patterns of demand appear to be random, meaning that there is no apparent predictable cycle. Yet even in this case, causes can often be identified, especially when a service organisation has detailed records on customer interactions. (Abubakari, 2016).

2.7.9 Strategies for matching service capacity and demand

When a service organisation has a clear grasp of its capacity constraints and an understanding of demand pattern, it is in a good position to develop strategies for matching capacity and demand. There are two general approaches for accomplishing this match. The first is to smooth the demand fluctuations themselves by shifting

demand to match existing supply and the second is to adjust capacity to match fluctuations in demand.

When shifting service demand to match capacity, service organisation seeks to shift customers away from periods in which demand exceeds capacity, by convincing them to use the service during periods of slow demand. This change may be possible for some customers only. However, customers who cannot shift and cannot be accommodated will represent lost business for the firm. Nevertheless, during periods of slow demand of the service, the organisation seeks to attract more and different customers to utilise its productivity capacity. Organisations can reduce demand during peak times, communicate with customers, modify timing and location of service delivery, offer incentives for non-peak usage, set priorities and charge full price (Shopify, 2017). When increasing service demand to match service capacity, various approaches to consider include focusing on increased demand for service, or on price and facilities differentiation.

Another strategic approach to matching service supply and demand would focus on adjusting service capacity. The fundamental idea is to adjust, stretch and align capacity to match customer demand. During periods of peak demand the organisation seeks to expand its capacity as much as possible. During periods of slow demand, the organisation would attempt to shrink capacity to co-ordinate resource allocation. From the above, service organisation can temporarily stretch capacity, time, labour, facilities or equipment. Further, aligning organisation capacity with service demand fluctuations is another strategy. This strategy is also known as a “*chase demand*” strategy. By adjusting service resources creatively, organisations can chase the demand curves to match capacity with customer demand patterns (Chen & Yu, 2017). It is agreeable that service organisation can take specific steps to include part-time employees, rent or share facilities, equipment and schedule downtime in efforts to match service demand and capacity. Combining demand and capacity strategies represent multiple strategy approach that some service organisations use. This combination requires to figure out which is the best set of strategies for maximizing capacity utilisation and sustainability. However, it can be challenging, particularly when the service offering is a constellation of offerings within one service setting.

2.7.10 Strategies when service capacity does not match demand

When service capacity does not match demand, one of the queuing strategies such as operational logic, reservation process, differentiation or make waiting pleasurable can be used. When queue management is inefficient, the first step in operational logic is to analyse the operational processes aimed at removing any inefficiencies. It may be possible to re-design the system to move customers along more quickly. Nevertheless, when queues are inevitable in service delivery process, the organisation would face operational decisions to configure the queues (Chen & Yu, 2017).

Chen and Yu (2017) argue that queue configuration refers to the number of queues, locations, spatial requirement and their effect on the quality service delivery. Zeithamel *et.al.* (2016) suggest that queues can be configured in multiple system, single queue or take-a number approach. In the multiple-queue system, the customer arrives at the service facility and must decide which queue to join and whether to switch later if the waiting time appears shorter in another line. Whereas in the single-queue system, fairness of waiting time is ensured in the fact that the first-come, first-served rule applies to everyone. In the take-a-number approach, when customers arrive, they have to take a number to indicate their position in the line.

However, when customers cannot avoid to wait in the process, reservation strategy should be enforced. For example, a restaurant has to establish reservation process to spread demand. In addition, transportation companies, theatres, doctors and many other service providers currently use reservation systems to alleviate long waiting period in the service delivery process. The main idea behind reservation strategy is to guarantee that the service will be available when the customer arrives (Kluwer, 2016).

Considering that not all customers should wait for the same length of time in the queue, differentiation strategy can be used. Service organisations can differentiate customers by allowing some to experience shorter waiting period than others. That is known as “queue discipline”, which reflects management discretion policies indicating who to select next for service. Differentiation can be based on factors such as importance of the customer, urgency of the job, duration of the service transaction and payment of a premium price (Zeithamel *et.al.*, 2016). Even when they have to wait too long, customers can be more or less satisfied depending on how the waiting period is

handled by the organisation. Thus, managers have to find ways to make waiting time pleasurable (Kluwer, 2016). When service failure happens, service recovery is the primary process of service organisation to retain its customers and minimise the costs associated with customer defection and negative word of mouth for harming organisations' reputation. The process of service recovery is discussed next.

2.7.11 Service recovery

Service failure is generally described as service performance that falls below a customer's expectations in such a way that leads to customer dissatisfaction (Zeithamel *et.al.*, 2016). Service recovery refers to the actions taken by an organisation in response to service failure. Failure occurs for many reasons such as the service may be unavailable when promised, it may be delivered late or too slowly, the outcome may be incorrect or poorly executed by less motivated employees (Choua, Hui Hsub & Jia Gooc, 2009). Service failure bring about negative feelings and responses can generate effects and paradox.

Service recovery refers to resolving customer problems effectively which would have a strong impact on customer satisfaction, loyalty, word-of-mouth communication and bottom-line performance. Customers who experience service failures but who are ultimately satisfied acknowledge recovery efforts, often become more loyal to the organisation. That loyalty translates into profitability, sustainability, improved employees' working conditions, communication, personal growth, business policies and procedures, security and supervision (Better Business Bureau, 2014).

However, the service recovery paradox occurs when a customer who was initially dissatisfied with service experience, goes on to experience a high level of excellent service recovery, leading them to be even more satisfied and more likely to purchase than if no problem had occurred at all. Although such extreme instances are relatively rare, that initial disappointed customer who experienced good service recovery might even be more satisfied and loyal as a result (Choua, Hui Hsub & Jia Gooc, 2009). As such, online service recovery enabling technologies have the potentials to add value in the process, improve working conditions, increase employees' job satisfaction and motivation and deliver quality service.

2.7.11.1 Service recovery strategies

Service recovery strategies include reducing the impact of service failure, encouraging and tracking complains, responding timeously, providing adequate explanation of the failure and treating customers fairly. Reducing the impact of service failure implies that service employees should deliver according to brand promises by doing the right thing the first time. In so doing, service recovery becomes unnecessary because customers get what they expect, thus enabling savings in terms of service re-processing and compensations for errors committed (Randhawa & Scerri, 2017).

Nevertheless, it is possible that service employees' efforts to deliver according to brand promises does not prevent service failure. In such scenario, it would be advisable to acknowledge the failure, encourage customers to report the nature of service failure because even in a zero defections organisation that aims for 100 per cent service quality, failure occurs sometimes. However, it was established that when customers report service failure, they usually request quick responses. Research suggests that 46 per cent of complaining customers would be satisfied if the complaint was handled by the first contact in the organisation. However, once three or more contacts get involved in addressing the complaint, the percentage of customers who are satisfied with service failure response drops to 21 per cent (Randhawa & Scerri, 2017).

When providing adequate explanations about the causes of service failure, customers do understand why the failure occurred. Real cause explanations in a friendly and fairly manner would defuse negative reactions and convey respect for the customer who expect to be treated fairly in terms of the outcome they receive, the process by which the service recovery takes place, and the interpersonal treatment received from employees attempting to address the service failure (Zeithamel *et.al.*, 2016). Choua, Hui Hsub and Jia Goooc (2009) argue that service organisation employees should strive to maintain long-term relationships with customers; hence in case of service failure, customers that have strong relationships with the organisation are often more co-operative during service failures and more open to the organisation's service recovery efforts.

Established service recovery programmes reinforce conservative-relational competitive advantage that would be achieved when adopting a new service delivery channel because the programme would improve employees' working conditions to learn from mistakes, improve internal communication, creates basis for personal growth and better understanding of business policies and procedures (Choua, Hui Hsub & Jia Gooc, 2009).

Motivated employees' ability to learn from mistakes includes learning from lost customers. Lost customers are customers who decided to de-register from a service as result of service failure. It is argued that discovering the reasons customers switched the brand can assist in preventing service failures in the future (Zeithamel *et.al.*, 2016). Ethically, it is recommended that service organisations should proactively anticipate on customer complaints before being forced to do so through legislation. Indeed, if service organisation is not seen to be responding to the complaints of customers, governmental bodies may step in and impose regulations and legislations to ensure the protection of the consumer (Choua, Hui Hsub & Jia Gooc, 2009).

2.7.11.2 Service guarantee

A guarantee is a pledge or assurance that the service offered by the organisation will perform as promised and, if not, then some form of reparation will be undertaken. There are benefits associated with service guarantee. Service guarantees can serve not only as a marketing tool but as a means for defining, cultivating, and maintaining quality throughout an organisation. Service guarantee benefits include forcing the organisation to improve working conditions in order to meet customers' demand, setting clear business standards for the organisation, continuous improvement efforts, and employee morale and loyalty enhancement (AIS Solutions, 2017).

When an individual buys a car, a camera, or a toaster oven, they receive a warranty, a guarantee that the product will work. However, receiving a warranty for services such as auto repair, wedding photography, business registration or a catered dinner becomes a challenge. It is argued that services simply cannot be guaranteed because they are generally delivered by human beings, who are known to be less predictable than machines, and they are usually produced at the same time they are consumed.

The above does not mean that customer satisfaction cannot necessarily be guaranteed. Service organisations equipped with service enabling technologies can commit to error-free service that can guarantee customer satisfaction. Motivated employees in service who put customer interests first do not necessarily lead to service failure. For example, Lufthansa guarantees that customers will make their connecting flights “*if there are no delays due to weather or air-traffic control problems*”. Yet these two factors cause 95 per cent of flight delays around the world. Bank of America will refund up to six months of cheque account fees if a customer is dissatisfied with any aspect of their cheque account service. Indeed a good service guarantee is unconditional, easy to understand meaningful, easy to invoke, and easy to collect on (AIS Solutions, 2017).

Effective communication is a critical component of customer service for service organisations. Customer service efforts are designed to ensure the prompt and efficient delivery of quality services to customers, as well as the effective recovery from any service-related issues that may arise. In dealing with customers, communication is essential, whether it is face-to-face, over the phone, via email or, increasingly, through online channels. The next section discusses internal and external communication in service organisation.

2.7.12 Managing internal and external communications in service organisation

There is a need to coordinate online and offline marketing communication channels in service organisations. Previously customers received marketing information about goods and services through mass-communication sources such as televisions (TV) and newspapers. Today’s customers receive communications from a wide variety of advertising channels such as Websites, direct mail and interactive communication tools such as virtual communities Facebook, LinkedIn, Twitter, YouTube, blogs, mobile phone applications, viral marketing and gaming (Choua, Hui Hsub & Jia Gooc, 2009).

From the above, service organisation that distributes information through multiple channels should be certain that customers receive unified messages and promises. These channels include not only marketing communication messages that flow directly from the organisation but also personal messages that employees send to customers.

The Service marketing triangle emphasises that the customer of services is the target of two types of communication. First, external marketing communication includes traditional channels such as advertising, corporate Websites, sales promotions and public relations. Second, interactive marketing communication involved the messages that employees send out to customers through such channels as personal selling, customer service interactions, service encounter interactions and services capes (Tankosic & Mikelic, 2017).

A service organisation should ensure that these interactive messages remain consistent, both among themselves and with those sent through external communications. In fact, the third side of the triangle, internal marketing communications, should be managed so that information from the management team to front-line employees is accurate, complete and consistent with customers' expectations.

2.7.12.1 Key service communication challenges

Discrepancies between what is communicated and customers' expectations can affect customer evaluations of quality service. However, key service communication challenges are service intangibility, service promise management and internal marketing communications. The essence and benefits of a service is often difficult to communicate to customers. Intangibility makes marketing communication for services more challenging for both marketers and customers. The intangible nature of services creates problems for customers both before and after purchase (Tankosic & Mikelic, 2017).

Unlike public services which are mandatory, before buying services, customers are challenged within decision process of services to consider. During purchase, customers often hardly differentiate service packages. However, after purchase, they experience cognitive dissonance. Cognitive dissonance refers to a situation involving conflicting attitudes and beliefs of customers, which produces a feeling of discomfort leading to an alteration in one of the attitudes or beliefs to reduce the discomfort and restore balance (Tankosic & Mikelic, 2017). In service industry, incorporeal existence of the brand, service abstractness, and lack of alternative create cognitive dissonance.

In service organisations, gaps between offerings create problems in managing promises. These problems are often caused when service promises were made by the employees who lack the necessary information to make accurate statements (Tankosic & Mikelic, 2017).

To avoid such deviations, service organisations should integrate multiple functions such as marketing and operations. Because service advertising and personal selling promise what employees do, frequent and effective communication across functions is critical. There is a relationship between the accuracy of internal marketing communications (employees' perception) and quality service delivery (AIS Solutions, 2017). Hence, to avoid service mismatch, organisations should train, motivate employees by improving working conditions which create job satisfaction (AIS Solutions, 2017).

2.7.12.2 Strategies to match service promises with delivery

Strategies to match service promises include addressing service intangibility, managing service promises, and managing internal marketing communication. The strategies objective is to enhance the targeting, meaning to deliver quality service that is greater than, or equal to, promises made to relevant market segment. Different ways to address service intangibility include crafting advertising messages that clearly communicate service attributes and benefits to the market segments and encourage word-of-mouth for social media communication. Strategies namely narratives, vivid information, interactive imagery, corporate brand icons to make the service tangible, video-sharing networks enable organisations to overcome service intangibility (Tankosic & Mikelic, 2017).

In the manufacturing of physical goods, it is frequent that the departments that make the promises and those that deliver them can operate independently. However, in the services, the sales and marketing departments do make promises about what other employees in the organisation will fulfil. Because what employees do cannot be standardised to the same extent as physical goods, greater coordination and management of promises are required. This coordination can be achieved by creating strong service brand and coordinating all of the organisation's marketing communications (Tankosic & Mikelic, 2017).

Strong service brands reduce customer's perceive monetary, social, or safety risk in buying services. Even though most of public service organisation offerings are mandatory, however, it is still necessary for these organisations to enforce strong brand culture. The main focus of corporate brand in public sector is to create awareness aimed at re-positioning the organisation vis-à-vis its internal customers (employees). One of the most important yet challenging aspects of managing corporate brand image involves coordinating all the external communication. With the advent of the Internet, main communication channels are Websites, search engine optimisation, traditional advertising, online advertising, social media advertising, mobile applications and sales promotions based on the organisation's public relations strategies (Choua, Hui Hsub & Jia Gooc, 2009).

2.7.13 The financial impact of quality service delivery

There is a relationship between quality service and profitability of service organisation. Many managers in public service organisations have trusted the sense that an increase in service will lead to an increase in the country's GDP. Studies conducted to determine the effect of customer service on the country's GDP have shown that improving working conditions in public service organisations has a significant and positive impact on country's financial performance and credit ratings. Improved working conditions leads to employee motivation and job satisfaction which make the organisation sustainable in the long run (Randhawa & Scerri, 2017).

2.7.13.1 Approaches to pricing services

Service organisations can utilise either cost-based, competition-based or demand-when pricing new service. In cost-based pricing, service organisation determines expenses from materials and labour, adds percentages for overhead and profit, and thereby arrives at the price. The basic formula is:

New service price = Direct costs + Overhead costs + Profit margin

From the formula, one can argue that direct cost involves material and labour that are associated with delivering the service, overhead costs are a share of fixed costs, and the profit margin is a percentage of full costs (direct + overhead). However, there are

some challenges in cost-based pricing. One of the major challenges is defining the units in which a service is purchased (AIS Solutions, 2017).

Competition-based pricing approach focuses on the prices charged by other service organisations in the same market. Competition-based pricing does not always imply charging the identical rate others charge, rather using others' prices as an anchor for the organisation's price. This approach is used predominately in two situations namely when services are standard across providers, and in oligopolies characterised by few large service providers (AIS Solutions, 2017). One of the challenges in competition-based pricing for services is that small service organisation may charge too little, thus not making margins high enough to remain in the market. This occurs in many family owned service establishments such as dry cleaning.

Cost-based and competition-based pricing are based on private service organisations and their competitors, rather than on customers. Neither approach takes into consideration that customers may lack reference prices, may be sensitive to non-monetary prices and may judge quality on the basis of price. However, demand-based pricing involves setting prices consistently with customer perceptions of value, where prices are based on what customers will pay for the services provided (Tankosic & Mikelic, 2017). One way that pricing of services differs from pricing of goods in demand-based pricing is that non-monetary costs and benefits must be factored into the calculation of perceived value to the customer. When services require time, inconvenience, psychological and search costs, the monetary price should be adjusted to compensate. However, when the services save time, searching cost, and create less inconvenience; the customer would be willing to pay higher monetary price.

2.7.13.2 Pricing strategies that link to service value

There are four pricing strategies for the four service value defined by the organisation. The first pricing strategy is when ***the service value means low price***. When monetary price is the most important determinant of value, the organisation focuses mainly on price. Strategies such as discounting, odd pricing, synchronic-pricing, dynamic pricing and penetration pricing are used when the organisation defines value as low price (SEO Book, 2017).

The second strategy is when ***the organisation means value is everything***. When the organisation is mainly concerned with selling components of service, monetary price is not of primary concern, hence strategies such as prestige pricing and Skimming pricing will be used. The third strategy is when ***the organisation means value is the quality being offered***, hence, some organisations consider both quality and monetary price as major indicators for efficient and effective service delivery (SEO Book, 2017). The fourth strategy is when ***the organisation means value is all being offered for all***. In this scenario, price framing, price bundling, complementary pricing and results-based pricing are used because the organisations define value as “**inclusive**”, not just the benefits they offer (AIS Solutions, 2017).

Service organisations understand that service prices are perceived differently from goods prices. However, managers and employees should articulate innovative ways to deliver quality service. Debate demonstrating how the value of technologies enables quality service delivery in public service organisation is discussed in the next subsection.

2.8 E-GOVERNANCE

Electronic governance (e-governance) is the application of Information and Communications Technology (ICT) to the processes of government functioning in order to bring about Simple, Moral, Accountable, Responsive and Transparent (SMART) governance (The World Bank, 2017). The above involve the use of ICTs by government agencies for various reasons namely information exchange with citizens, speedier and more efficient delivery of public services, improving internal efficiency, reducing value chain costs and improving quality of services (Smith & Blundel, 2014; Molnar, 2009:70; Shuster, 2012; Ciborra, 2002).

However, the Internet is a worldwide system of interconnected computer networks that use the Transfer Control Protocol-Internet Protocol (TCP/IP) set of network protocols to reach billions of users. The Internet began as a U.S Department of Defence network to link scientists and university professors around the world. Being a network of networks, currently, the Internet serves as a global data communications system that links private, public, academic and business networks via an international

telecommunications backbone that consists of various electronic and optical networking technologies (Singh Sodhi, 2017).

Decentralised by design, no one owns the Internet and it has no central governing authority. As a creation of the Defence Department for sharing research data, this lack of centralisation was intentional to make it less vulnerable to wartime or terrorist attacks. The terms "Internet" and "World Wide Web" are often used interchangeably; however, the Internet and World Wide Web are not one and the same. The Internet is a vast hardware and software infrastructure that enables computer interconnectivity. The Web, on the other hand, is a massive hypermedia database interconnected by hyperlinks. One could imagine the World Wide Web as the platform which allows others to navigate the Internet with the use of a browser such as Google Chrome (Singh Sodhi, 2017).

Considering that the Internet and the World Wide Web have dominated human civilisation, with no exaggeration, Table 2.7 indicates Internet timeline showing how it has evolved over the years and it continues to change the world we live in.

Table 2.7 Internet timeline

NO	Year	Fact
01	1957	Union of Socialist and Soviet Republic (USSR) launches Sputnik into space. In response, the USA creates the Advanced Research Projects Agency (ARPA) with the mission of becoming the leading force in science and new technologies.
02	1962	J.C.R. Licklider of MIT proposes the concept of a "Galactic Network." For the first time ideas about a global network of computers are introduced. J.C.R. Licklider is later chosen to head ARPA's research efforts.
03	1962	Paul Baran, a member of the RAND Corporation, determines a way for the Air Force to control bombers and missiles in case of a nuclear event. His results call for a decentralised network comprised of packet switches.

04	1968	ARPA contracts out work to BBN. BBN is called upon to build the first switch.
05	1969	RPANET created - BBN creates the first switched network by linking four different nodes in California and Utah; one at the University of Utah, one at the University of California at Santa Barbara, one at Stanford and one at the University of California at Los Angeles.
06	1972	Ray Tomlinson working for BBN creates the first program devoted to email.
07	1972	ARPA officially changes its name to DARPA Defence Advanced Research Projects Agency.
08	1972	Network Control Protocol is introduced to allow computers running on the same network to communicate with each other.
09	1973	Vinton Cerf working from Stanford and Bob Kahn from DARPA begin work developing TCP/IP to allow computers on different networks to communicate with each other.
10	1974	Kahn and Cerf refer to the system as the Internet for the first time.
11	1976	Ethernet is developed by Dr. Robert M. Metcalfe.
12	1976	SATNET, a satellite program is developed to link the United States and Europe. Satellites are owned by a consortium of nations, thereby expanding the reach of the Internet beyond the USA.
13	1976	Elizabeth II, Queen of the United Kingdom, sends out an email on 26 March from the Royal Signals and Radar Establishment (RSRE) in Malvern.
14	1976	AT& T Bell Labs develops UUCP and UNIX.
15	1979	USENET, the first news group network is developed by Tom Truscott, Jim Ellis and Steve Bellovin.
16	1979	IBM introduces BITNET to work on emails and listserv systems.
	1981	The National Science Foundation releases CSNET 56 to

		allow computers to network without being connected to the government networks.
17	1983	Internet Activities Board released.
18	1983	TCP/IP becomes the standard for internet protocol.
19	1983	Domain Name System introduced to allow domain names to automatically be assigned an IP number.
20	1984	MCI creates T1 lines to allow for faster transportation of information over the internet.
21	1984	The number of Hosts breaks 1,000
22	1985	100 years to the day of the last spike being driven on the Canadian Pacific Railway, the last Canadian university was connected to NetNorth in a one year effort to have coast-to-coast connectivity.
23	1987	The new network CREN forms.
24	1988	Traffic rises and plans are to find a new replacement for the T1 lines.
25	1989	Arpanet ceases to exist.
26	1990	Advanced Network & Services (ANS) forms to research new ways to make internet speeds even faster. The group develops the T3 line and installs in on a number of networks.
27	1990	A hypertext system is created and implemented by Tim Berners-Lee while working for CERN.
28	1990	The first search engine is created by McGill University, called the Archie Search Engine.
29	1991	U.S green-light for commercial enterprise to take place on the Internet.
30	1991	The National Science Foundation (NSF) creates the National Research and Education Network (NREN).
31	1991	CERN releases the World Wide Web publicly on August 6th, 1991.
32	1992	The Internet Society (ISOC) is chartered.
33	1993	InterNIC released to provide general services, a database

		and internet directory.
34	1993	The first web browser, Mosaic (created by NCSA), is released. Mosaic later becomes the Netscape browser which was the most popular browser in the mid 1990's.
35	1994	New networks added frequently.
36	1994	First internet ordering system created by Pizza Hut.
37	1994	First internet bank opened: First Virtual.
38	1995	NSF contracts out their access to four internet providers.
39	1995	NSF sells domains for a \$50 annual fee.
40	1995	Netscape goes public with 3rd largest ever NASDAQ IPO share value.
41	1995	Registration of domains is no longer free.
42	1996	The WWW browser wars are waged mainly between Microsoft and Netscape. New versions are released quarterly with the aid of internet users eager to test new (beta) versions.
43	1996	Internet2 project is initiated by 34 universities.
44	1996	Internet Service Providers begin appearing such as Sprint and MCI.
45	1996	Nokia releases first cell phone with internet access.
46	1997	(Arin) is established to handle administration and registration of IP numbers, now handled by Network Solutions (linterNic).
	1998	Netscape releases source code for Navigator.
47	1998	Internet Corporation for Assigned Names and Numbers (ICANN) created to be able to oversee a number of Internet-related tasks.
48	1998	Internet is connection established in Congo-Brazzaville.
	1999	A wireless technology called 802.11b, more commonly referred to as Wi-Fi, is standardised.
49	2000	The dot com bubble bursts, numerically, on March 10, 2000, when the technology heavy NASDAQ composite index peaked at 5,048.62.

50	2001	Blackberry releases first internet cell phone in the United States.
51	2002	Internet2 now has 200 university, 60 corporate and 40 affiliate members.
52	2002	The US E-Government Act of 2002 defines "electronic Government.
53	2003	The French Ministry of Culture bans the use of the word "e-mail" by government ministries, and adopts the use of the more French sounding "courriel".
54	2004	The Term Web 2.0 rises in popularity when O'Reilly and MediaLive host the first Web 2.0 conference.
55	2005	Estonia offers Internet Voting nationally for local elections.
56	2005	Youtube launches. The city of Johannesburg launches its first online service delivery platform.
57	2006	Zimbabwe's Internet access is almost completely cut off after international satellite communications provider Intelsat cuts service for non-payment.
58	2007	Internet2 officially retires Abilene and now refers to its new, higher capacity network as the Internet2 Network.
59	2008	Google index reaches 1 Trillion URLs.
60	2008	NASA successfully tests the first deep space communications network modeled on the Internet. Using software called Disruption-Tolerant Networking, or DTN, dozens of space images are transmitted to and from a NASA science spacecraft located about more than 32 million kilometers from Earth.
61	2009	ICANN gains autonomy from the U.S government.
	2010	Facebook announces in February that it has 400 million active users.
62	2010	The U.S House of Representatives passes the Cybersecurity Enhancement Act (H.R. 4061).
63	2011	Online business registration in South Africa.

(Source: Investec, 2017)

The advent of the Internet introduced the concept of electronic governance or e-governance, which is the application of information and communication technology (ICT) for delivering government services, exchange of information, communication transactions, integration of various stand-alone systems and services between government-to-customer (G2C), government-to-business (G2B), government-to-government (G2G) as well as back office processes and interactions within the entire government framework. Through e-governance, there are stages from which government services are made available to citizens in a convenient, efficient and transparent manner. The three main target groups that can be distinguished in e-governance concepts are government, citizens and businesses (The World Bank, 2017).

2.8.1 Stages of e-governance

E-Governance is positively linked to the development of computer technology, networking of computers and communication systems. In developing countries, such technologies and systems became available with a perceptible time lag as compared to developed nations (Weick, 2003). However, e-governance proceeded through different phases namely computerisation, networking, online presence and online interactivity. In the computerisation phase, with the availability of personal computers (PCs), most of government departments are equipped with computers, which enable word processing and data processing. The networking phase is characterised by the fact that some units of a few government organisations are connected through a hub leading to sharing of information and flow of data between different government entities (The World Bank, 2017).

The online presence phase is characterised by increased Internet connectivity, thus there is need for maintaining a presence on the Web. This resulted in maintenance of websites by government departments. Generally, these government departments Websites contained information about the organisational structure, contact details, reports and publications, objectives and vision statements of the respective government entities (Weick, 2003). The online interactivity phase is a natural consequence of online presence, which opened up communication channels between government departments and the citizens. The main aim at this stage is to minimize

the scope of personal interface with government departments by providing downloadable forms, instructions, acts and rules. In some cases, this has already led to online submission of business permit application (Smith & Blundel, 2014).

However, drawing from the work of Semila and Vidyasagar (2015) and in line with Figure 1.1: conceptual framework, it is arguable that e-governance platform could take advantage of the functionalities of computers, smartphones, cellular phones, tablets, game console and social networks; classic and mobile applications to engage with citizens. Therefore, it could be argued that online business registration system could improve Congolese entrepreneurs' Decision Support Systems (DSS) (Yates & Paquette, 2010:1).

2.8.2 Types of interactions in e-governance

The World Bank (2017) research argues that e-governance facilitates interaction between different stakeholders in governance; and these interactions may be categorised as Government to Government (G2G), Government to Citizens (G2C), Government to Business (G2B) and Government to Employees (G2E). In the G2G *interactions*, ICTs are used not only to restructure the governmental processes involved in the functioning of government department but also to increase the flow of information and services within and between different departments. This kind of interaction is only within the sphere of government and can be both horizontal i.e. between different government departments as well as between different functional areas within an organisation, or vertical i.e. between national, provincial and local government agencies as well as between different levels within an organisation. The primary objective is to increase efficiency, performance and output (Yates & Paquette, 2010:1).

In the G2C interactions, an interface is created between the government and citizens which enables the citizens to benefit from efficient delivery of a large range of public services. This expands the availability and accessibility of public services on the one hand and improves the quality of services on the other. It gives citizens the choice of when to interact with the government department, e.g. 24 hours a day, 7 days a week; from where to interact with the government, e.g. service centre, office or from home; and how to interact with the government; e.g. through internet, fax, telephone, email,

or face-to-face. The primary purpose is to make government, citizen-friendly (The World Bank, 2017).

In the G2B interactions, e-governance tools are used to aid the business community to seamlessly interact with the government. The objective is to cut red tape, save time, reduce value chain costs and create a more transparent business environment when dealing with the government. The G2B initiatives can be transactional, such as in licensing, permits, procurement and revenue collection. They can also be promotional and facilitative, such as in trade, tourism and investment. These measures help to provide a congenial environment to businesses to enable them to perform more efficiently (The World Bank, 2017). The government being by far the biggest employer, the G2E interactions is a two-way process between the government and its employees. The Use of ICT tools helps in making these interactions fast and efficient on the one hand and increase satisfaction levels of employees on the other (The World Bank, 2017).

Notwithstanding what has been argued, e-governance would require a high level of ICT expertise and creativity from the service organisation employees (Mbiadjo & Djeumene, 2015:22; Ciborra, 2002). Laget, Ndegwa and Bonuke (2015) and Ciborra (2002) stress creativity, flexibility and expertise that are necessary for efficient and effective service delivery. In the next section, the rationale for e-governance in public service organisation is discussed.

2.8.3 E-governance and digitisation

Despite the growing interest of the Internet in the public service delivery, little evidence exists of academic research that explores the potentials of online business registration (ICT) as a re-branding tool that improves working conditions (Ramnarain & Govender, 2013). Nneka (2015:17) argues that this limitation could be due to inadequate expertise and creativity from the public service employees; and management team's inability to link improve employees' working conditions, communication, employees' personal growth, business policies and procedures, security and supervision with online interactivity (Better Business Bureau, 2014).

Kokt and Koelane (2013: 3099) argue that owing to limited ICT resources, many public organisations in Africa still use service marketing methods to interact with citizens, and this could be the case for most organisations in Congo-Brazzaville. Yet, DTI South Africa invested in e-governance resources, in order to track customer data more easily, increased productivity in a way that reduces weekend work and over-time (Metric Marketing, 2017). Arguably, DTI South Africa's online business registration platform played crucial role in the country's competitive branding as investment destination (Doing Business, 2016). Online service delivery created an opportunity for DTI South Africa to enforce Social Media Marketing (SMM). According to Wonjun and Chang Wan (2011), social media marketing campaigns in Facebook, Twitter and YouTube have the potentials to ignite corporate website traffic, and improve internal communication among service employees.

E-governance within an organisation as argued by Shemi (2012), Garud and Karnøe (2003:277) is a "deliberate and substantive fusion of the Website design appeal and its functionality that would enable the institution to operate dynamically online 24/7". Thus, the degree of e-governance success would depend on the substantive convergence between the organisation's Website planning, designing and implementation activities. E-governance within business operations is positively related to the time gap between planning, designing, and implementing (Ferneley & Bell, 2005). Considering that e-governance is a creative process, spontaneity and extemporaneity are often overemphasised in the literature (Shemi, 2012). Drawing from the works of Dutta, Lanvinand Wunsch-Vincent (2014:7-8) and in view of the argument by Shemi (*ibid.*), effective e-governance in an organisation would be guided by employees' intuition, and the real time nature of the action in the process.

In tune to that, despite the fact that e-governance might arise because of serendipitous events in the service value chain; it would likely be an intentional process involving consciousness of employees' action. In his work, Baker (2007:695) acknowledges that when employees are motivated and satisfied with their work, their input in e-governance Website planning, design, and implementation phases would converge. Such convergence would be an ongoing process to obtain a novel outcome (Johnson, 2005:364).

In general, the novelty of the outcome would highlight the change in terms of service delivery mode without modifying the essence of what is being delivered (Johnson, *ibid.*). It is argued that e-governance adoption in the service organisation is positively related to the organisation resources (Tseng, Lee & Chu, 2015:48-49) and the need for innovation (Baker & Nelson, 2005; Secchi, 2012). Similarly, Ciborra (2002) correlates scenarios in South Africa, USA and EU state members, where the merit of e-governance underscores the transformation of organisations from self-centred to service-driven. The next section discusses the resultant challenges and opportunities of e-governance in service organisation.

2.8.4 E-governance in service organisation

E-governance adoption alone does not necessarily generate innovative results in the service delivery. However, there are other managerial dimensions to consider for service efficiency and effectiveness (Thomson & Pian, 2003:79).

2.8.4.1 E-governance and team expertise

Faraj and Sproul (2000) argue that expertise encompasses specialised skills and ICT knowledge that team members bring to the team work. Similarly, Amabile (1996) posits that field-relevance and job-related critical skill rely on team members' reasoning, perception, experience and education (Vukasovic, 2013:57). It is arguable that the lack of expertise among the team members will hinder the process of e-governance adoption in public service organisation because it requires diverse set of skills in a team for a new way of service delivery to be implemented.

2.8.4.2 E-governance and team work

Successful e-governance implementation requires infrastructure, practice, expertise, and ICT knowledge. Good e-governance team is not just a function of having the "right" expertise on the team. Rather, expertise must be coordinated within the team and its interdependencies must be managed effectively. Similarly, teamwork skills of team members in the organisation associated with quality ICT knowledge include trust among members, a common goal, a shared responsibility, a common vocabulary, and the ability both to lead and to follow (Singh Sodhi, 2017).

More than that, Vera and Crossan (2005) agree that the collaboration needed for innovative team in the organisation is based on both cognitive and affective factors. It is agreeable that on the cognitive side, when service employees share a collective mind, this fact enables better coordination when trying to come up with new processes of delivering service. Under pressure caused by processes to observe when adopting ICT in service delivery, effective teams are able to adapt and anticipate other members' information needs because of a shared understanding of the situation creates transactive memory. Wegner (1987) defines transactive memory as the set of knowledge possessed by team members, coupled with an awareness of who knows what. From the above, it is agreeable with Vera and Crossan (2005) that the greater the teamwork quality in terms of trust and cooperation in the organisation, the more positive the relationship between technology adoption and innovative outcomes.

2.8.4.3 E-governance and experimental culture

The adoption of service delivery technologies requires a context that supports team members' creativity (Vera & Crossan, 2005:209). For example if managers want team members to free-associate and embrace e-governance in service organisation, then they have to create an environment in which employees are not going to be punished for service failure. It is argued that that blocking employees' ideas is a denial of the possibility of encounter. Hence, the rule of agreement creates a context in which employees in service organisation are required to accept, support, and enhance the ideas expressed by others (Seham, 2001). It can be argued that blocking the ideas of other team members could be considered as form of aggression (Johnstone, 1979) because answering "no" to new ideas erases any possibility of new way of service delivery to be adopted (Vera & Crossan, 2005:209).

2.8.5 E-governance and real-time communication

Service organisations that want to adopt ICT in service delivery need to learn to be attentive and alert to what is happening in the *now* of the firm. However, this requires infrastructures that provide teams with relevant real-time information. Eisenhardt (1989), Eisenhardt and Tabrizi (1995) define real-time information as available business data for which there is no fall back time between facts and reporting. It is argued that open information sharing and communication is a critical aspect to achieving high levels of participation in innovation processes in teams of organisations

adopting new technologies to deliver quality service.

2.8.6 E-governance and employee training

Given the above, one can argue that training not only has the capacity to increase employees' creativity, spontaneity, expertise, and teamwork quality; but also creates the context that supports e-governance adoption namely experimental culture, real-time information, communication, and transactive memory. Vera and Crossan (2005:209) emphasise that training needs to start by developing an understanding of what e-governance is and positioning it as a recommended choice when facing circumstances of urgency and uncertainty in business environment. Indeed, training is positively related to the incidence of e-governance adoption in public service organisation. Furthermore, it is arguable that the applicability of technology adoption theory in the organisation correlates with e-governance implementation. The next section elaborates on the inter-relations between e-governance, service marketing, and quality service delivery.

2.8.7 E-governance, service marketing and quality service delivery

From marketing perspectives, it becomes imperative to demarcate the overlaps of e-governance, service marketing, and quality service delivery in the organisation (Baker, Miner & Eesley, 2003). In the process of e-governance adoption, e-governance in service organisation would involve making-do, despite absence of resources that might be expected to produce a solution (Molnar, 2009:76). Dennis and Macaulay (2007) argue that in service marketing, e-governance in general occurs with pre-planning and the ability to adopt new service delivery technology would be proof of how capable the organisation is (Leybourne, 2006:77). The tangential marketing connection between the above views and the point that e-governance adoption may educe the understanding of improved service delivery in public organisation sound overlapping concepts; hence, illustrated in Figure 2.3.

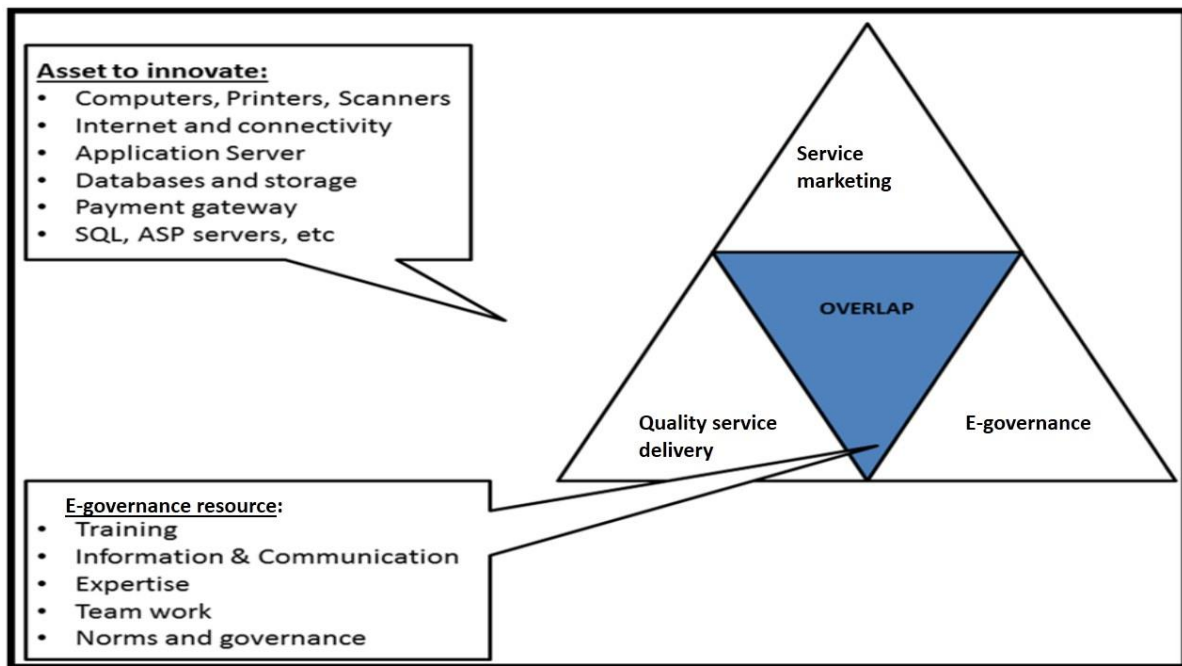


Figure 2.3: Overlaps of e-governance, service marketing and delivery

(Source: Mirvis, 1998)

Given the above overlaps, e-governance model is discussed next.

2.8.8 E-GOVERNANCE MODELS

There are various e-governance models that service organisation can choose from and improve service delivery. However, this research is inspired by Backus (2001) e-governance model. The rationale of this choice has two dimensions. The first is based on Backus (2001) e-governance understanding which fits better study concepts; hence arguing that e-governance is more than just a government Website on the Internet; and define e-governance *“as the application of electronic means in the interaction between government and citizens and government and businesses, as well as [the application of electronic means] in internal government operations”*.

The second dimension is that Backus (2001) e-governance model inspired South Africa’s. On June 8, 2005, the Gauteng province launched the Gauteng Provincial Government Internet portal. The Gauteng Online portal (<http://www.gautengonline.gov.za>) gives members of the public access to e-government services and information about services for citizens, business, employees and other government entities. It also provides a single entry point to provincial

government Websites. The launch marked the first phase of services to be offered on the site. Members of the public are be able to access the portal through any facility with internet access, including certain multi-purpose community centres and telecentres (Mphidi, 2005).

The Gauteng Online portal was built using three major concepts, namely information technology as key drivers of state transformation, emerging pressures on government and public administration and the magnitude of e-governance. The model takes into account four major dimensions of e-governance, namely the level at which the transformation is taking or has taken place; the actors in e-governance and e-government (i.e. the public and private sectors); the functions performed in e-governance (i.e. service delivery, policy-making, and regulation); and the technology that is used in enabling e-governance (Mphidi, 2005).

It is agreeable that the South African government, which is at an advanced stage of e-government in African continent, provides online services, among others, online business registration, birth registration and parenting, education and training, youth, relationships, living with a disability, the world of work, social benefits, a place to live, transport, travel outside South Africa, moving into or visiting South Africa, sports and recreation, citizenship, dealing with the law, retirement and old age, and death (Onyancha, 2017). Figure 2.4 illustrates Backus' e-governance model for quality, effective and efficient service delivery.

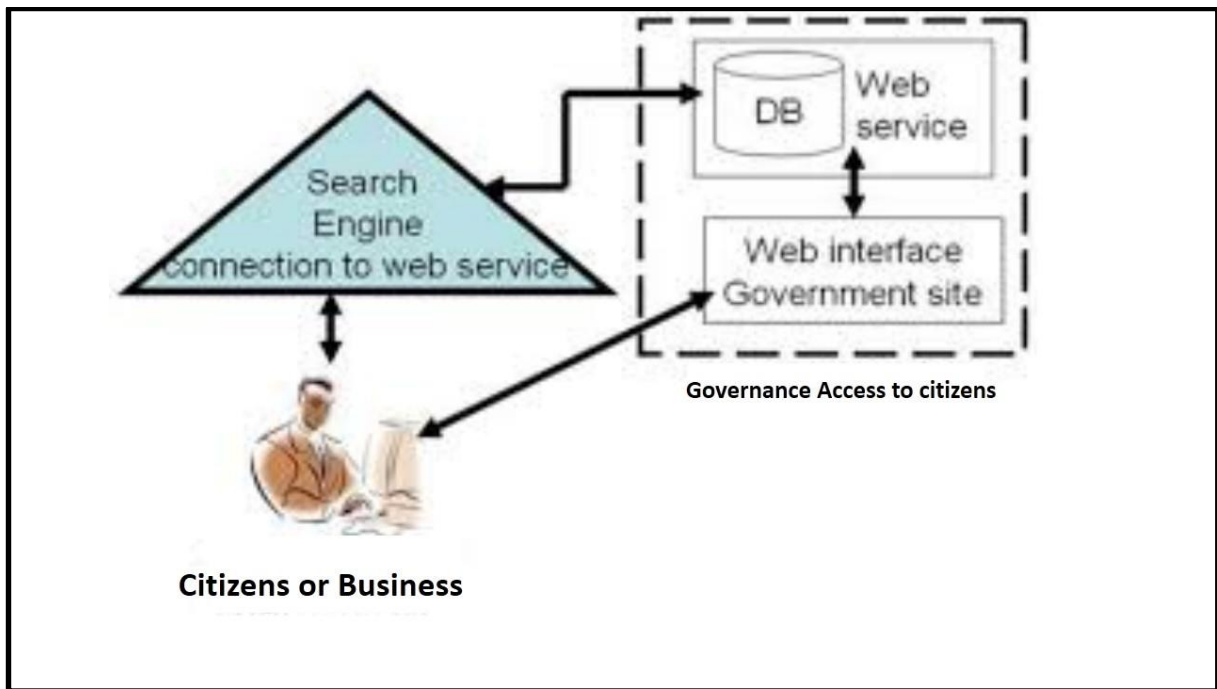


Figure 2.4: Backus's e-governance model for quality service delivery

(The computer graphic stands for any ICT tool (or actors) involved in e-governance)

(Source: Mphidi, 2017)

However, in its framework of planning and implementing e-governance, Oracle (2006) spells out the following components that are mandatory in several activities that need to be accomplished for successful Backus's e-governance implementation. Business strategy is important to clearly define the strategy and implementation plan in order to avoid duplication, wastage of effort, minimize chances of mistakes and lead to the creation of an integrated system. In terms of infrastructures, managers in public sector should specify how various government offices would be interconnected with one another and with external entities. The hardware description primarily should contain specifications matching service employee's knowledge and skills to improve the processes to avoid service delivery mismatch. Database management, is crucial because it is a planning tool on how government information can be transformed to electronic versions. Further, decisions need to be made concerning the enabling technologies such as speech interface, security and solutions, web hosting and multilingual support technologies, and middleware to avoid service failure (Onyancha, 2017).

Online service implementation would be needed for applications adoption and integration. Most importantly, service organisation employees training would enable them to use the online service; hence maintenance and up gradation are basically ongoing processes in the adoption of e-governance solutions. Given the above discussed e-governance model, the benefits of e-governance are explored next.

2.8.9 BENEFITS OF E-GOVERNANCE

The benefits of e-governance include better access to information and quality services for citizens, simplicity, efficiency and accountability in the government and expanded reach of governance. Better access to information and quality services for citizen underlines that ICT would make available timely and reliable information on various aspects of governance. In the initial phase, information would be made available with respect to simple aspects of governance such as forms, laws, rules and procedures. Regarding services, there would be an immediate impact in terms of savings in time, effort and money, resulting from online and one-point accessibility of public services backed up by automation of back-end processes (The World bank, 2017).

Simplicity, efficiency and accountability in the government underscores that the application of ICT to governance combined with detailed business process re-engineering would lead to simplification of complicated processes, weeding out of redundant processes, simplification in structures and changes in statutes and regulations. Expanded reach of governance suggests that rapid growth of communications technology and its adoption in governance would help in bringing government departments to the doorsteps of the citizens. Expansion of telephone network, rapid strides in mobile telephony, spread of internet and strengthening of other communications infrastructure would facilitate delivery of a large number of services provided by the government.

2.8.10 CHALLENGES OF E-GOVERNANCE ADOPTION IN SERVICE ORGANISATION

Introducing e-governance in government departments can pose various challenges. Difficulties can arise throughout from crafting business strategy that proposes e-governance adoption, until the development, implementation and updating of e-

government sites (The World Bank, 2017). However, Table 2.8 indicates service organisation employees' related challenges in adopting e-governance.

Table 2.8 Employees 'related challenges in adopting e-governance

No	Challenge	Description
01	Bureaucratic government organisation	In many cases the flow of information between governments departments and agencies is developed and operated to meet the needs of government departments and agencies but not citizens.
02	IT impact and education	Employees without access to ICT, without ICT knowledge would not be able to participate in the e-governance hence causing the divide.
03	Legal framework	E-governance requires Legal Framework that supports and recognises digital communication.
04	Lack of leadership and management	Political leadership which lacks the necessary drive to bring about change in the public sector may be the biggest obstacle to development. Leaders who do not see e-government as priority pay little attention to ensuring that IT policies and programmes are introduced.
6	Employee awareness and confidence	Creating awareness of the advantages of e-governance and persuading employee in service organisation to become users of the system in order to deliver the service in innovative way is a bigger challenge.
7	Security	Government departments need to protect their information and systems from breaches of computer security that threaten not only the integrity and availability of services but also the confidence of employees and the general public in the system.

(Source: Onyancha, 2017; Mphidi, 2005)

2.9 THE IMPACT OF E-GOVERNANCE ON NATION BRANDING

The new competitive foreign investment environment has prompted analogies between competition among governments for foreign investment and competition among firms for market share. Given the similarities in the nature of the competition, it is not surprising that countries are adopting marketing strategies that parallel private companies. People tend to think about countries as a complete entity when they are considering whether to visit them, buy their products, or engage with them in some other way. In short, from a marketing point of view, people think of countries as brands. Even when a country (Brands and Branding, 2017).

2.9.1 Country branding

A destination can be any territorial area such as a village, a town, a city, a region or a country. A destination brand is the totality of perceptions, thoughts and feelings that individuals hold about a place while destination branding refers to the organising principle that involves orchestrating the messages and experiences associated with the place to ensure that they are as distinctive, compelling, memorable, and rewarding as possible. It is argued that nation branding aims at forming a complete picture of a nation, whereas destination branding aims at promoting specific regions or critical components of the tourism industry within a country (Mugobo & Wakeham, 2014).

A country could be associated with particular benefits that are offered by a destination. These benefits act as a cue for decision-making regarding purchases (Chandler, 2017). The perceived value of a place is affected by a country's characteristics such as e-governance infrastructures. As globalisation continues to increase at an accelerating rate, competition between countries has emerged as one of the major challenges facing contemporary governments across the world. The global market has become a battlefield for skilled workforce, Foreign Direct Investment (FDI), trade and export opportunities, and international influence. Presently, the notion of a global village and competition among nations has reached a new level of sophistication (Thought.com, 2017).

The above has compelled countries to come up with innovative ways of delivering public services to promote their uniqueness in order to become the destinations of choice for investments. One strategy that nations are embracing in order to build and sustain their global competitiveness and ensure national economic development is e-governance. It is a managed process of building nation brand equity, brand image and a sustainable and competitive country reputation based on empowered employees in public service organisations (Singh Sodhi, 2017).

It was point out that governments are tasked with the economic and political development of their countries. National development cannot be achieved in isolation of the international community, as markets and foreign policies compete in the international arena. The complexity of these elements and a nation's political, economic, legal and cultural environment all contribute to a nation's identity and image (Policy Practice, 2017). Different countries have adopted different strategies in order to confront specific challenges, which they face. More and more countries around the world are embracing e-governance in order to differentiate themselves on the world stage and to strengthen their economic performance. Countries as culturally and geographically diverse as Germany, South Korea, New Zealand, Scotland, Estonia, Britain and South Africa have judged it worthwhile to develop nation-branding based on the ICT adoption in public service (Singh Sodhi, 2017; Mugobo & Wakeham, 2014).

The use of nation branding technique is growing from the diversification of branding that steadily increased its scope from basic physical products to diverse nations. What makes nation branding different from traditional product branding is its complex, multidimensional nature, and the multiple stakeholder groups that must be acknowledged by the nations (Policy Practice, 2017).

2.9.2 Evolution of nation branding

As a concept, nation branding has only recently evolved through a convergence of streams of knowledge embodied within the field literature on national identity and literature on the country-of-origin effect (UIP Occasional, 2017). In the framework depicting the evolution of nation branding, it was points out that: "*...the academic fields of national identity and country-of-origin are shown to interact within the context of economic globalisation, whose contradictory effects consists of the homogenisation of*

markets, and at the same time an increasing sense of national identity. The streams of knowledge embodied within the national identity literature on the one hand, and within the country-of-origin literature on the other, have only recently converged" (Mugobo & Wakeham, 2014).

However, research on nation branding is not entirely new. For the past 40 years, numerous studies have been conducted on 'country of origin effect': the effect of national image on products. Nations have followed a nation branding approach for several decades. To place the evolution of nation branding into a wider perspective, it could be claimed that nations have always branded themselves through their symbols, currency, anthems, names and so on, and that it is merely the terminology of nation branding that is new, rather than the practice itself (Policy Practice, 2017).

It is agreeable that the idea of nation branding is a relatively new phenomenon but, it has gained an increasingly important role in both domestic and external markets, as countries across the world have to contend with global competition. Benefits of nation branding are discussed next.

2.9.3 Benefits of successful nation branding

Nation branding, has become a strategic tool of a country's competitiveness and an unbranded state will have a difficult time attracting economic and political attention, and that image and reputation are becoming essential parts of each country's strategic equity (Public and cultural diplomacy, 2017; Mugobo & Wakeham, 2014). E-governance branding process strengthens e-democracy and helps both internal development and successful integration into the world community on all levels. In the global marketplace, a nation brand should ideally act as a national umbrella brand, seeking to differentiate the country's offerings from those of international competitors and promoting a nation's image to an international audience (Mugobo & Wakeham, 2014).

The benefits of nation branding include the followings:

- Increases currency stability;
- Helps restore international credibility and investor confidence;
- Reverses international ratings downgrades;
- Increases international political influence;
- Leads to export growth of branded products and services;
- Increases inbound tourism and investment;
- Stimulates stronger international partnerships;
- Enhances nation building (confidence, pride, harmony, ambition, national resolve);
- Reverses negative thoughts about environmental and human rights issues;
- Helps diffuse allegations of corruption and cronyism;
- Brings greater access to global markets; and
- Leads to an improvement in the ability to win against regional and global business (Public and cultural diplomacy, 2017; Mugobo & Wakeham, 2014).

Thus, a positive brand image can help a country to reverse brain drain. One of the consequences of globalisation, which is hardest on African markets, is the haemorrhaging of its best-educated and most talented workers, entrepreneurs and academics to the developed nations. Brain drain remains one of the most difficult challenges, which can be addressed by e-governance adoption in Africa (Mugobo & Wakeham, 2014).

2.10 SUMMARY

Services are all economic activities whose output is not a physical product or construction, is generally consumed at the time it is produced, and provides added value in forms (such as convenience, amusement, timeliness, comfort, or health) that are essentially intangible concerns of its first purchaser. Considering the growth of the service industry, service organisations learnt that marketing and managing services present many challenges. Marketers of tangible goods recruited into service industries realise that their skills could not be directly transferred. Thus, marketers and service organisations realise the need for new approach in managing services. Technology and specifically information technology (IT) has shaped service marketing in

organisations. Such influence creates potentials for new service offerings, new way to deliver service, enabling employees in service organisation and extending the global reach of the service.

Various governmental organisations including DTI of South Africa acknowledge that online service adoption brings public services close to citizens and re-brands the nation as investment destination. Similarly, Bharati and Chaudhury (2006:88-89) argue that the current status of online business registration in the USA reduced operating costs of the business registrar. EU countries have enabled online application within all governmental departments where service organisation employees receive electronic applications of business registration application, tax declaration, customs declaration, thus saving them time in the process.

Online business registration has been adopted at the government department of trade and industry as driver to reduce value chain cost of service process in India. Al-Qirim and Bathula (2002:537-540) findings conclude that online business registration plays a significant role in New Zealand's economy owing to the country's geographical remoteness from the rest of the world. Thus, regardless of various constraints related to resources facing the country, online service was catalytic up to 35 per cent of the country's GDP.

Public service organisations in general are already positioned in a certain way, however, online service technologies adoption re-positioned them. Re-positioning refers to the major change in positioning. Successful organisation re-positioning requires to change the way services have been being offered. Thus, online business registration adoption is one of the tools an organisation can use to re-position vis-à-vis its internal customers (employees).

Public service organisation employees' abilities to engage in re-positioning efforts via online business registration adoption would prompt them to develop specific competence. In the process, adequate application of online business registration adoption would generate positive outcomes namely improved working conditions, motivation and job satisfaction. It is argued that designed online business registration system proposed to an organisation should include Stageware, Orgware, Linkware,

and Customerware. Stageware includes the physical setting of the online business registration system, which would play an important role in shaping service employees' perception on the new system of delivering service in innovative way.

Online business registration system adoption would be transformational innovation and source of competitive advantage. However, a country's sustainable competitive advantage would depend on the government departments' perception of the innovation and its ability to embrace this new knowledge in nearing public service delivery to citizens. The advent of the Internet introduced the concept of electronic governance or e-governance, which is the application of information and communication technology (ICT) for delivering government services, exchange of information, communication transactions, integration of various stand-alone systems and services between government-to-customer (G2C), government-to-business (G2B), government-to-government (G2G) as well as back office processes and interactions within the entire government framework.

This research was inspired by Backus (2001) e-governance model. The rationale of this choice has two dimensions. The first is based on Backus (2001) e-governance understanding which fits better study concepts; hence arguing that e-governance is more than just a government Website on the Internet; and define e-governance "*as the application of electronic means in the interaction between government and citizens and government and businesses, as well as [the application of electronic means] in internal government operations*". The second dimension is that Backus (2001) e-governance model inspired South Africa's; hence, on June 8, 2005, the Gauteng province launched the Gauteng Provincial Government Internet portal. The Gauteng Online portal (<http://www.gautengonline.gov.za>) gives members of the public access to e-government services and information about services for citizens, business, employees and other government entities.

Electronic governance (e-governance) is the application of Information and Communications Technology (ICT) to the processes of government functioning in order to bring about simple, moral, accountable, responsive and transparent (SMART) governance. The above involve the use of ICTs by government agencies for various reasons namely information exchange with citizens, speedier and more efficient

delivery of public services, improving internal efficiency, reducing value chain costs and improving quality of services. Considering that the Internet and the World Wide Web have dominated human civilisation, with no exaggeration, the service has evolved over the years and it continues to change the world we live in. Focus is now turn to **Chapter 3: The underpinning theory**.

CHAPTER THREE UNDERPINNING THEORY

3.1 INTRODUCTION

This chapter discusses Task-Technology Fit (TTF) and Technology Acceptance Model (TAM) in service organisation as the underpinning theories with which to describe the social phenomenon: online business registration adoption at the government Department of Trade and Industry (DTI) of Congo-Brazzaville as branding tool.

Arguably, inspired from successfully implemented model of DTI South Africa, DTI Congo was used as case study enabling the feasibility of considering online business registration platform as nation branding tool. Although the research is quantitative in nature, the embedded social technical processes make it appropriate to use technology acceptance theory to interpret the interplay between actors. An analysis of the problem suggested that it is a social reality and as such, it can be studied through the lens of a social theory. Because the intension was to propose a service-enabled technology adoption approach to quality service delivery, the underpinning theory provides a means to understand planned behaviour, task-technology fit and resource based view to be able to tease out the problem.

3.2 SIGNIFICANCE OF THE UNDERPINNING THEORY

The rationale behind the underpinning was not to repeat the literature. However, considering that e-governance is part of IS studies, thus the author used socio-technical approach to guide the study. The use of theory to underpin this study was motivated not only by its interpretative nature but also of the interplay between technical and non-technical factors which are involved in the process of technology adoption. Underpinning theories are referred to, by Gregor (2002) as theories for understanding social context in IS studies. The theories are intended to explain "how" and "why" things happen in the way that they do (Mkhomazi & Iyamu, 2017). The analysis of the data determines and shapes the results of the study. The analysis of data was fundamental to this study. Hence, the tool (theory) used in the analysis is deemed critical. How data was collected and analysed was within the frame of the theory which underpin the study (Olivier, 2009).

The use of the underpinning is critical factor for successful research in doctoral level. In recent years, reviewers for conferences and journals draw more attentions and emphasis on how results and conclusions are reached in articles. It was point out that without underpinning theories, many research conclusions look speculative (Mkhomazi & Iyamu, 2017). As a result, for many research articles are not accepted for publication. This is attributed to, mainly two factors: it is either the analysis of the data was not underpinned by theory, or the theory employed was not appropriate. Unlike in software engineering where improvisation and bricolage may work well as underpinning theory, sharing the view that individual's perceptions and attitudes towards a new online business registration system will be spontaneous; might be erroneous. This Flocinaucinihilipilification cannot be the case with online business registration, since its adoption is intended just to smoothen the service, improve efficiency, and effectiveness of service delivery.

Given the above, TAM and TTF were appropriate tools to guide the study because of the influence of DTI employees' behaviour towards acceptance of new technology, which in return, is stimulated by other factors. It is arguable that the reason for choosing technology acceptance theory in this study was to suggest a solution in the business registration process and determine the merits of this workplace technology adoption in organisation's re-branding strategy. It was important to define the concept of a model that will allow government department of trade and industry employees in general to embrace online business (Crespo & Del Bosque, 2008).

3.3 THEORY IN INFORMATION SYSTEMS RESEARCH

After discussing the significance of theory in research, it becomes imperative to discuss the importance of theory in the field of information system. Information System (IS) is a planned system of collecting, storing, and disseminating data in the form of information needed to carry out the functions of management (Tutorials Point, 2017). Recalling from Figure 1.1, one can argue that conceptually, information is the message being conveyed among value chain members. Unlike data which is unprocessed fact, information is knowledge communicated or received, concerning a particular fact or circumstance, which in return cannot be predicted and resolve uncertainty. However, plain collected data as raw facts cannot help in decision-making. Indeed, data is the

raw material that is organised, structured, and interpreted to create useful information systems.

Given the above, this section intends to synthesize and reflect upon the debate on theories and theorizing in the IS field. As such, the key contribution is to inform the study about opportunities in theorising and putting the concept of theoretical and conceptual framework to work together. Through this debate, the study advances and supports the discipline's current strive towards more theoretical thinking and the increasing demand for theoretical contributions in marketing and IS. The discourse around theoretical background between information and data in the IS field will cover three dimensions namely motivational background, conceptual foundation and terminological foundation.

3.3.1 Motivational background of theory in the IS field

In his mission to justify the rationale of theory in IS, Shapira (2011) pointed that theory is the highest level of scientific inquiry. Above and beyond Shapira's views, the need for a thorough examination of theory can be strongly rooted in the field's history. While this section can only sketch out an overview, the field's evolution can be described as from topics to methods to theories. Mueller and Urbach (2013) argue that the challenge in the era of topics (from the 1960s to the early 1980s) was to define the essential areas of inquiry IS scholars are dealing with. Arguably, motivated by a call for more empirical insights to address speculations about the effects of new technologies on organisations, many researchers turned towards studying IS in the field.

However, the times were not without critics. For example, Dearden (1972) commented that the conceptual entity of IS is embedded in "a mish-mash of fuzzy" thinking and incomprehensible jargon. He further argues that it is nearly impossible to obtain any agreement on how IS problems are to be analysed, what shape their solutions might take, or how these solutions are to be implemented. Clearly, the above opens other avenues that point towards the increasing importance of theoretical considerations. Despite advances in identifying the topics and domains of IS research, concerns about the methodological aspects started to be raised by the mid-1980s (Mueller & Urbach, 2013). Some of the critics argue that IS at this stage was characterised by a lack of

standardisation of research methods (Khazanchi & Munkvold 2000). As a reaction, the methods era (between 1990s early 2000s) brought about an intensified discussion of methods through methods colloquia, edited collections, and influential essays.

Beyond better data alone, some of the discipline's key scholars started to express that in order to mature as a discipline, IS would also have to seek for better explanations. Hence, the discipline's leading scholars started to highlight the importance of the field's theoretical development. From the above, one can argue that a key argument for theory in doctoral level is that it can be a vehicle for informing and guiding the discovery and creation of new knowledge by allowing researchers to build on more basic explanations previously established by their colleagues. Thus, theories facilitate accumulating knowledge in the process of scientific discovery. Khazanchi and Munkvold (2000) share the views that theory is a cumulative tradition that helps disciplines to advance their understanding of the investigated subjects and to use that knowledge to solve problems in organisations.

Since the beginning of the theory era (mid-1990s), several scholars have complained about lack of such an IS-specific cumulative tradition of theory (Khazanchi & Munkvold 2000). In addition, the IS discipline has often been vehemently criticised for merely borrowing theories from other disciplines instead of creating its own (Straub, 2012). Practically, many of the phenomena observed in IS research have rather been explained using theories from neighbouring disciplines such as marketing, or psychology on the behavioural side and computer science on the technical side (Mueller & Urbach, 2013). Given the above, IS is often not fully recognised as a field, seems to have difficulties in publishing its results, and finds itself confronted with a stiff competition for scarce resources in journal space, managerial attention, research funding, and bright young minds (Hirschheim & Klein 2012).

An aspect that has further promoted the theory debate in the IS field is the ongoing and intense discussion in the field of marketing management research, which has witnessed a number of landmark contributions that seem to periodically provide an opportunity for scholars of this discipline to synthesise and advance their disciplinary understanding of what theory is and means for their research (Mueller & Urbach, 2013). Building on what can be learned about what theory is and how it can be

theorised, the following two sections synthesise the state of the discussion on theory across the IS discipline and its implications.

3.3.2 Conceptual foundations of theory in the IS field

According to Mueller and Urbach (2013), the emergence of the term “theory” can be traced back to most influential philosophers of science in the late 17th and early 18th centuries, and is probably one of the core concepts that determined the emergence of science. Etymologically, the term “theory” derived from the Greek *θεωρία* (“*theoria*”), which was used to describe a speculative interpretation of natural phenomena. As such, theory is a vessel to document human understanding of the world (Live Science, 2017). Charles (2017) expresses this understanding by referring to theories as nets to rationalise, explain, and to master the world. Currently, “theory” is being proposed as a paradigm that includes guessing, speculation, supposition, conjecture, proposition, hypothesis, conception, explanation and model (Charles, 2017). From the above, one can argue that if everything from a “guess” to a model has a theory behind it, then it becomes more difficult to differentiate what theory is, from what theory is not. Mueller and Urbach (2013) share the views that various attempts to define what theory is, are challenged by the fact that theory is approximated more often than it is realised, which suggests that theory is a continuum rather than a dichotomy.

Given the above challenge, Sutton and Staw (1995) choose a reverse approach and arguing that simple references to previous publications, standalone empirical data, lists of variables, constructs, diagrams, and hypotheses by themselves have less theoretical contributions. While the challenge to conceptually grasp what theory is can be regarded comforting, it also means that limited guidance is provided for current research that intends to move the IS field forward theoretically.

Bacharach (1989) anticipates the above challenge and posits that theory is a system of statements targeted at describing, explaining, and predicting real world phenomena. Drawing from Bacharach (1989)’s work, it is agreeable that a scientific theory is a system composed of two core constituents: (1) constructs or concepts and (2) propositions as relationships between those constructs. Putting these two constituents together, the system should present a logical, systematic, and coherent explanation of a real-world phenomenon within certain boundaries. Therefore, the boundaries of a theory are often added as a third constituent.

3.3.3 Terminological foundations of theorising

In general, good theory is difficult to produce, therefore, some researchers may not even recognise it when theorised (Personality Research, 2017). This suggests that a process perspective on theory is needed. In this sense, the term “theorising” refers to evolution of theory over time as well as to the process of theory emergence. Given the above, theory and its process (theorising) should not have contradicting views; rather, mutually constituent and complementary. Depending on the researcher’s perception of the relationship between process (theorising) and product (theory), theorising can be understood as a process producing theory; hence some approaches have been proposed (Personality Research, 2017).

Theorising can be understood as a form of reasoning, that is, an attempt to craft conceptually convincing argument to describe, explain, and predict phenomena observed in the empirical world (Ochara, 2013). In this avenue, theoretical reasoning can be conceived as the process of using existing knowledge to draw conclusions, make predictions, or construct explanations. Part of theorising thus is the usage of general knowledge to explain and predict individual cases. In return, general knowledge is built from an additive understanding of repeated observations of similar phenomena in the past. Theorising, thus seems to be an iterative and never-ending process; from the specific to the general, and from the general back to the specific. These two parts of the process are termed inductive and deductive reasoning respectively.

Considering inductive and deductive reasoning, Mueller and Olbrich (2011) present four approaches to theorising. The first approach is *inductive theory building* in which researchers formulate theories based upon observed patterns of events or behaviours. Using this approach, observed patterns are explained by referring to the unique attributes of the phenomenon. The second approach is to build theories based on a *bottom-up conceptual analysis* of different sets of predictors potentially relevant to the phenomenon under investigation. The resulting framework is then used as a heuristic guide to develop propositions regarding the phenomenon. The third approach is to *extend or modify existing theories* to explain a new context. In this approach, basic theoretical foundations are modified to account for context changes, such as a different organisational setting in which new technologies are employed. Finally, the fourth approach is to *apply existing theories in entirely new contexts*.

However, the current study focuses on an introductory overview of induction and deduction as the most dominant modes of theoretical reasoning. Inductive reasoning starts with observations that are specific and limited in scope, and results in a generalised conclusion that is likely, in light of accumulated evidence (Jamani 2011). Induction involves a process in which general rules evolve from individual cases or observations of phenomena on the basis of a posteriori explanations (Jamani 2011). On one hand, inductive reasoning can provide valuable insights and increase human knowledge, thus make predictions about future events. On the other hand, it is based on a set of observations which is not complete and, thus, cannot yield certainty. In the IS field and its reference disciplines such as marketing management, many paradigms for inductive theory building exist; common examples are case-based theory building, grounded theory, as well as simulation and experiments.

Case-based theory building is a research strategy that uses one or more cases to create theoretical constructs. According to Yin (2003), case studies are rich, empirical descriptions of particular instances of a phenomenon that are typically based on a variety of data sources. Such cases are used as the basis for developing theory inductively. The resulting theory is emergent as it is situated in and developed by recognising patterns of relationships among constructs within and across cases and their underlying logical arguments (Ridder, 2017). Case study research is considered a viable IS research strategy for three main reasons. Firstly, researchers can study information systems in a natural setting, learn about the state of the art, and generate theories from practice. Secondly, case study allows the researcher to answer “how” and “why” questions, thus, to understand the nature and complexity of the processes taking place. Thirdly, case study is an appropriate way to research an area in which few previous studies have been carried out. Given the above, case-based theory building has received considerable attention in the IS field because of its methodological contributions.

Another strategy is the *grounded theory method* ((Ridder, 2017). The basic assumption of grounded theory is that it focuses on the understanding of a phenomenon by looking at its facets in different contexts. It does not primarily take a variance perspective, but aims at understanding the underlying constructs, their relations, and the dynamics of these relationships in a continuous interplay between

data collection and analysis (Mueller & Olbrich 2011). Thus, grounded theory allows for original and rich findings that are closely tied to the underlying data. It is agreeable that in IS research, grounded theory has proved to be useful for the development of context-based, process-oriented descriptions and explanations. However, grounded theory studies have also been criticised for having a relatively low level of theory development which makes the appropriate use of this approach even more essential (Mueller & Olbrich 2011).

Furthermore, *simulation and experiments* are increasingly considered important methodological approaches to theory building. *Simulation* is particularly useful when the theoretical focus is longitudinal, nonlinear, or procedural, or when empirical data are challenging to obtain (Mueller & Olbrich 2011). Thus, simulation can be a powerful method for sharply specifying and extending extant theory in useful ways. Critics argue that that simulation methods often yield little in terms of theory development. Yet Mueller and Olbrich (2011) draw a roadmap for how to use simulations to develop theory and position simulations within the broad context of theoretical development. Similarly, the use of *experiments* can address problems and limitations encountered in other methodologies, and thus enable theory development.

Conversely to induction, *deductive reasoning* begins with the assertion of a general principle and proceeds to apply that principle to explain a specific phenomenon (Jamani, 2011). Deduction is drawing logical consequences from premises; if the original assertions are true, then the conclusion must also be true. However, while deductive reasoning can be used to make observations and expand implications, the conclusion of a deductive argument is already contained in its premises thus, cannot make predictions about non-observed phenomena. Arguably, theories and concepts from sociology, marketing, economics, and organisational behaviour can assist IS researchers in the formulation of conceptual models that gain insights into the problem. A popular example in which the theoretical reasoning in a reference theory has been adapted to explain an IS-related phenomenon is the Technology Acceptance Model and Task-Technology Fit and based in line with on the Theory of Planned Behaviour.

3.4 THE TECHNOLOGY ACCEPTANCE THEORY

The technology acceptance theory is an information systems theory that models how service providers in service organisations come to accept and use a technology to improve service delivery based on the Perceived ease-of-use (PEOU) (Klopping & McKinney, 2004). It was developed to explain and predict online service delivery usage and was theoretically grounded by Fishbein and Ajzen's Theory of Reasoned Action (TRA) (Sarver, 1983).

Klopping and McKinney (2004) argue that the emergence of the Internet enabled online business registration and e-governance. The Internet created an opportunity for public service organisation to reach out to citizens in a direct way. Despite the need for of online business registration adoption, lack of empirical model adaptation has been reported on the factors which belated its adoption in most of Central African countries. The technology acceptance theory states that public organisation service delivery promise influences citizens' attitudes, which lead to intentions, and finally to new behaviour. According to the theory, government department employees' readiness, attitudes and norms towards online business registration adoption will determine entrepreneurs' behaviour towards online business registration.

Davis (1989) pioneered the identification of the two major factors in the TAM: perceive usefulness and ease of use. It can be argued that perceived usefulness is the degree to which the government department employees believe that adopting an online business registration system will enhance the performance of their job; while perceived ease of use is the entrepreneurs' believe that using government department's online business registration system will be free of effort. Figure 3.1 illustrates the convergence of perceived usefulness and perceived ease of use towards service provider's behavioural intention.

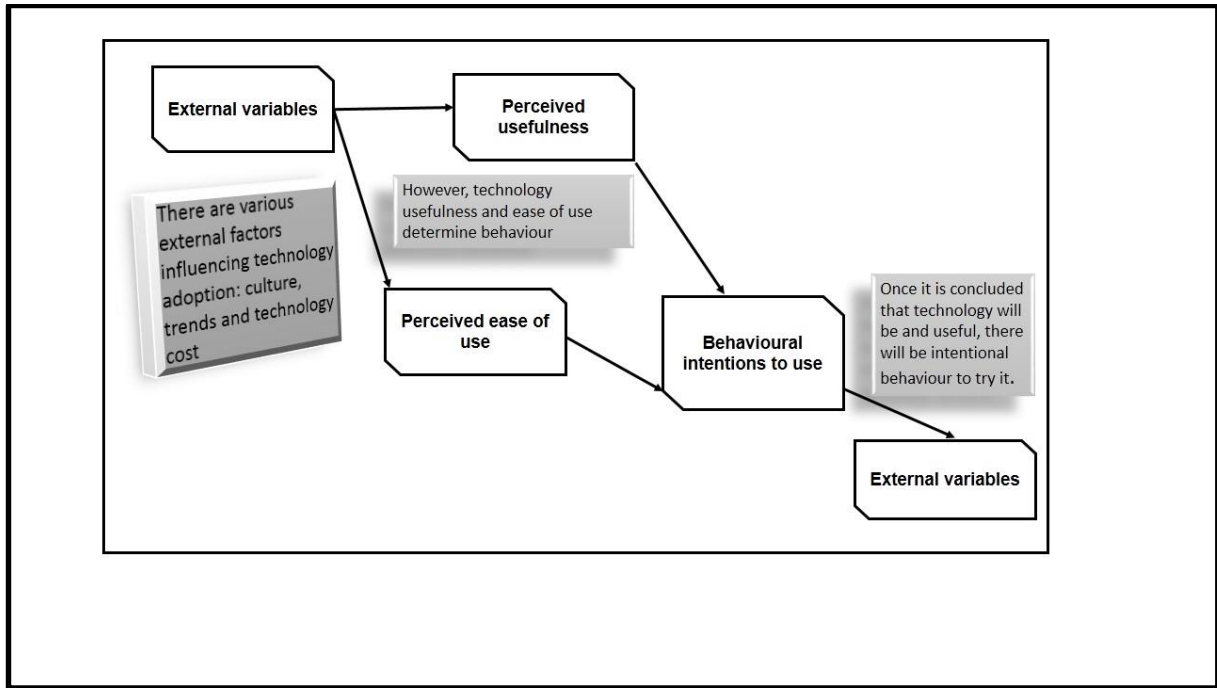


Figure 3.1: Theory of Technology Acceptance Model

(Source: Kloppping & McKinney, 2004)

According to Kloppping and McKinney (2004) the goal of the TAM is to provide an explanation of the factors determining online service delivery acceptance; while remaining parsimonious and theoretically justified. It was pointed out that the evidence for ease of use and perceived usefulness are positively related to the information quality of using the online service delivery system (Lee & Pennings, 2001). However, the TAM has been widely criticised. Criticisms include its questionable heuristic value, limited explanatory and predictive power and triviality (Chuttur, 2009). It is argued that the TAM should not divert researchers' attention away from other important theories such as planned behaviour, which is discussed next.

3.5 THE THEORY OF PLANNED BEHAVIOUR

Within the context of internal marketing, the Theory of Planned Behaviour (TPB) suggests that employees' behaviour can be explained by behavioural intention, which is influenced by the management's attitude, subjective norms, and perceived behavioural control towards the organisation (Schifter & Ajzen, 1985). Internal marketing is a process that occurs strictly within an organisation whereby the functional process is to align, motivate and empower employees to consistently deliver effective and efficient service (Yusuf, Sukati & Andenyang, 2016). Managers of

government department attitudes, subjective norms and perceived behavioural control towards online service adoption are positively related to employees' willingness to adopt the technology.

It is arguable that the rationale choice of contrasting the TPB model and the TAM is that the TPB is an established and extensively tested theory. In addition, the TPB model has proven to be successful in re-branding and re-positioning service organisations (Kang, Hahn, Fortin, Hyun & Eom, 2006; Werner, 2004). Given the above, the TPB could be used to explain employee behaviour towards online service system adoption. The TPB model includes a wide range of variables: attitudes, social influence and employee's perceived usefulness to migrate digitally and the fact that it introduces the effect of social influence, a variable traditionally related to the diffusion of innovations (Crespo & Del Bosque, 2008:2831).

Figure 3.2 is adequate for this study, as it provides good prediction while using few predictors, and it provides a complete understanding of the phenomena as it includes variables with very different conceptual scope.

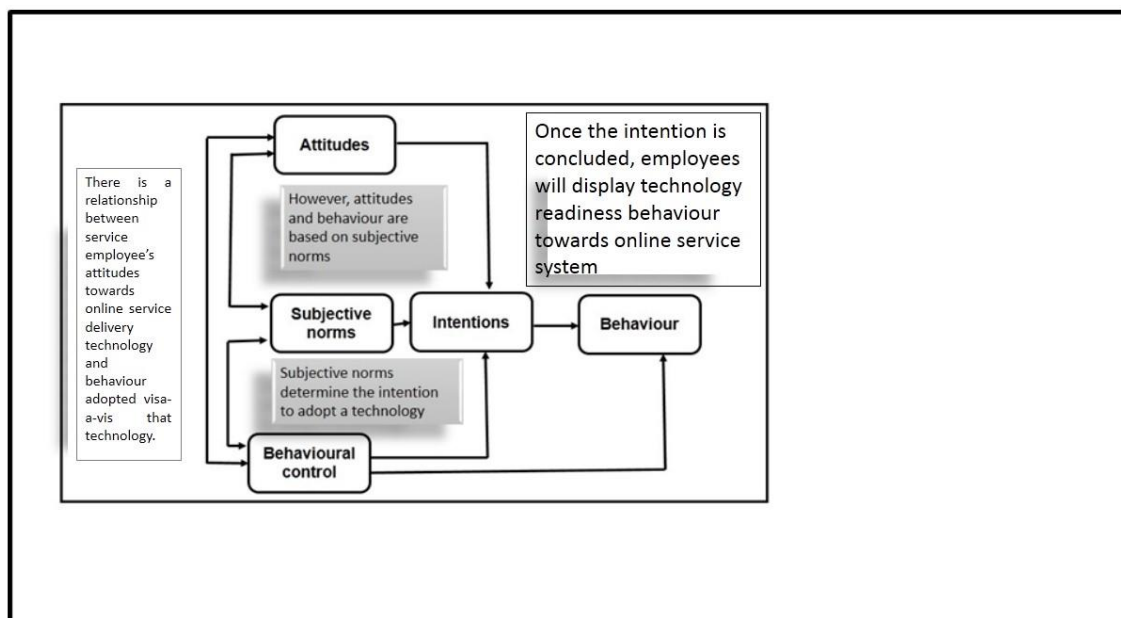


Figure 3.2: Theory of planned behaviour

(Source: Crespo & Del Bosque, 2008)

The illustration in Figure 3.2 reflects three kinds of the organisation's internal customer's variables determining behavioural intention: attitude towards behaviour, subjective norms and perceived behavioural control. Service organisation employee's attitude refers to their predisposition, for or against, to embrace online business, which generates new behaviour in the process (Fishbein, Ajzen & Sarver, 1983). On the other hand, subjective norms reflect how customers will be affected by the perception of their reference group; which is management team serving as frame of reference for service registration decisions (Hefer & Cant, 2013).

Subjective norms arise from two things: the normative beliefs the employee associates with significant referents, and the motivation to behave according to the wishes of management team. Finally, perceived behavioural control represents employee perception of the availability or lack of the necessary resources and opportunities to develop this behaviour. Thus, perceived control results from both individual beliefs regarding the factors determining behaviour and from control over such factors. According to the TPB model, attitude, subjective norms and perceived behavioural control are the elements that will help to understand the factors explaining online service adoption in the organisation.

However, the TPB model has some limitations. In spite of the fact that the TPB model is based on cognitive processing and a level of employee behaviour change (Bagozzi, 1992; Eagly & Chaiken, 1993), it overlooks emotional variables such as threat, fear, and mood of service organisation employees who are internal customers of the system (Eagly & Chaiken, 1993; Armitage & Conner, 2001). Given the above, the task technology fit theory is discussed next.

3.6 THE TASK-TECHNOLOGY FIT THEORY

The task-technology fit (TTF) theory suggests that the adoption of online service delivery technology will depend on how well the new technology fits the requirements of an organisation striving to deliver quality service (Klopping & McKinney, 2004). It is arguably true that an online business registration system will be adopted if it is a good fit with the task it supports (Michel, Brown & Gallan, 2008). The TTF theory has a model, which has been applied successfully to predicting online service awareness and acceptance (Michel, Brown & Gallan, 2008). In tune of that, the use of TTF theory

might be related to how well the employees of service organisation feel the government department's online service system fits the task of electronic business registration. However, the TTF is widely combined with the TAM for online service model assessment. Even though the TTF model is somewhat more effective than TAM for predicting online service delivery, it is arguable that a combination of the TTF model and TAM is a superior model to either the TAM or the TTF model alone. Figure 3.3 illustrates the combination of TAM and TTF model for efficient workplace technology adoption.

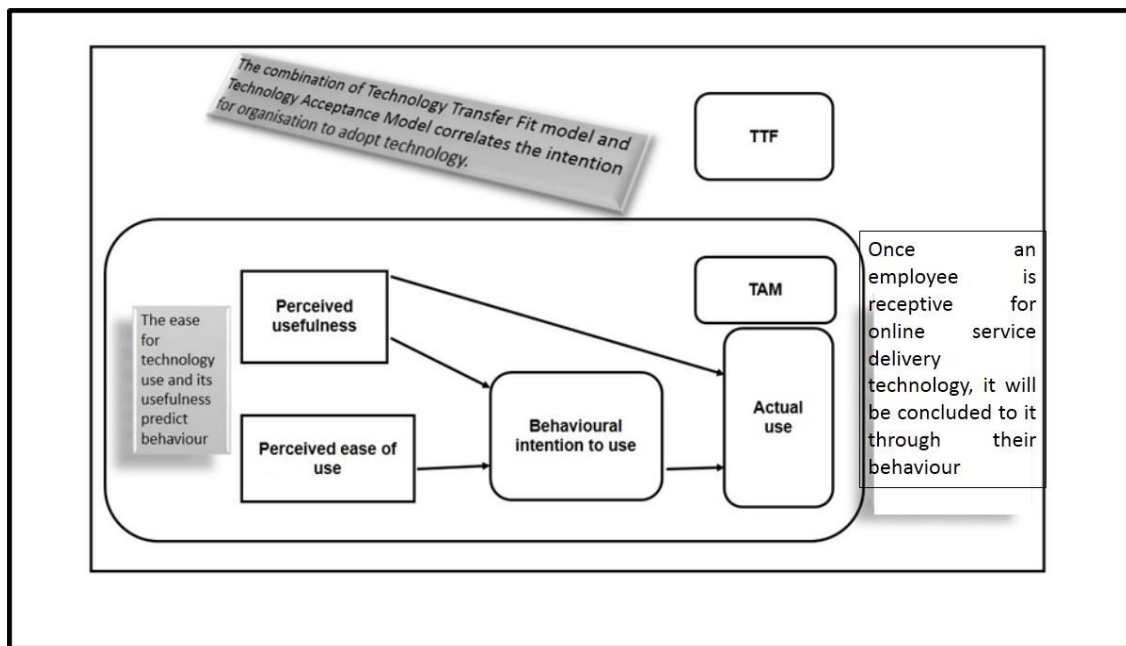


Figure 3.3: Combination of TAM and TTF

(Source: Klopping & McKinney, 2004)

From the combinations, a construct called TTF is a measure of the fit between the task (online service delivery) and the technology. This TTF affects perceived ease of use, perceived usefulness and the actual use. In terms of compatibility of computer systems; Liao, *et al.*, (2007) argue that compatibility affects perceived usefulness and attitude towards the use of online business registration system. Broadly, compatibility measures how the online business registration adoption will fit service employees' values, beliefs and customs, as well as the task- needs. Resource-based view theory is discussed next.

3.7 THE RESOURCE-BASED VIEW THEORY

The resource-based view (RBV) model was first introduced in 1959 in strategic management with the idea that a broader set of resources should be used in studying service organisation (Penrose, 1959). In spite of the RBV's novelty, Penrose's idea did not gain momentum at the time. In the course of time, Wernerfelt (1984:172) introduced the concept that the service organisation's resources can be studied as its source of competitive advantage. Put differently, one can argue that the organisation's assets, such as computer systems, skilled employees, brand name, e-governance knowledge, in-house knowledge of technology and customer relationships management, can lead to long-term efficient and effective online service delivery.

Further, Barney's (1991) work on the RBV indicates that sustained competitive advantage (SCA) occurs when a service organisation implements a system adding value in the process, creating strategy not simultaneously being implemented by other organisations. It is arguable that a service organisation's resource should be valuable, rare, inimitable and non-substitutable (VRIN) in order to generate SCA (Barney, 1991:102). The rationale of the RBV is that the model examines technology adoption in the organisation based on the availability of resource. One can argue that resources should be classified into tangible, intangible, and personnel-based resources. However, the organisation's capabilities include competencies such as employees' training, expertise, communication skills, and organisational culture of excellence in the combination of the resources. Ray, Barney and Muhanna (2004) agree that according to the RBV model in Figure 3.4, resources and capabilities of a firm are major components in formulating an innovating online service delivery model.

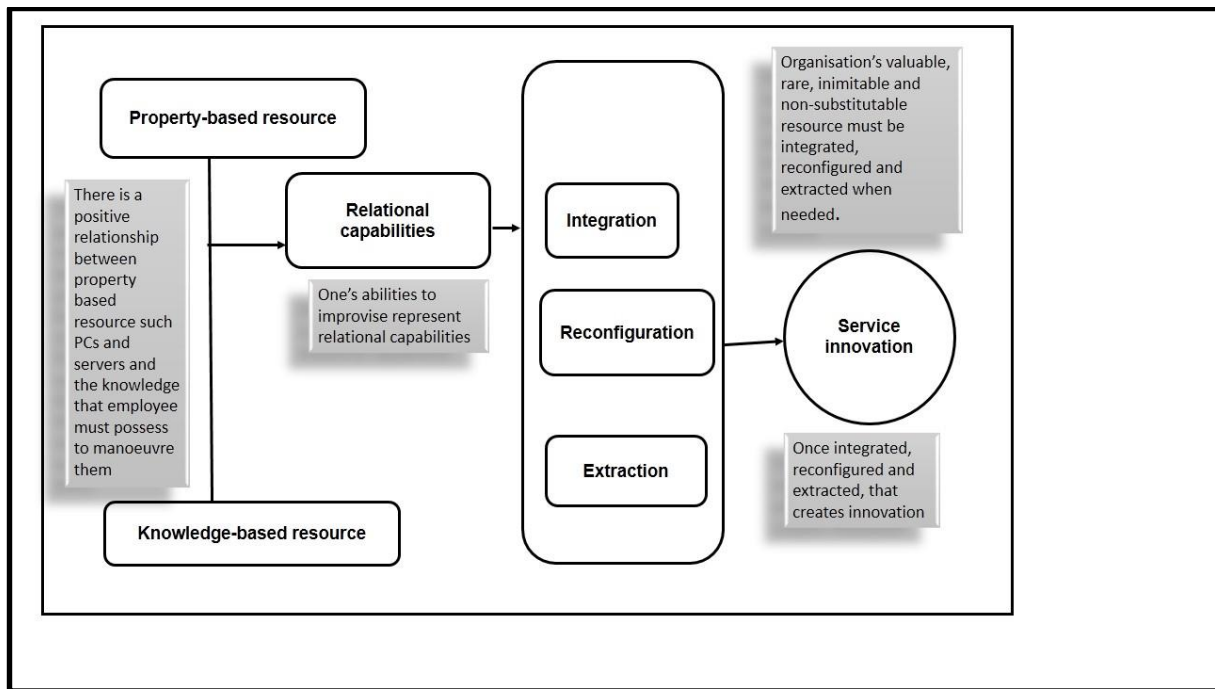


Figure 3.4: The Resource-based view model of online service delivery

(Source: Kim, Song & Triche, 2015)

Service organisations today desire management strategies that place them on the frontier of innovation. In the service industry, and especially in the niche of online business registration, viewing online service in the RBV perspective is important because it will shorten lead-time in the process and enable innovations that emphasise the dyads between service provider and the end-user. Factors in Figure 3.4 perform together to design a dynamic online business registration service, produce and deliver faster high quality service to entrepreneurs. Various authors explored the RBV model in different industries in the context of dynamic capabilities and service innovation. Miller and Shamsie (1996) contextualise the RBV model in re-branding and re-positioning the film industry. They define two types of main resources namely property-based resource and knowledge-based resource. The former is also called discrete and systematic resource and the latter is called functional and organisational. Milner *et al.*, (1996) determine types of resource leading to financial performance in film production. Similarly, Cho and Yu (2000) applied the RBV model to assess firms' intention towards Internet technologies adoption to achieve brand promise. They argue that a firm's internal characteristics such as IT infrastructure, employees' technical skills, and organisational culture of research and development influence firm's online business systems adoption.

According to Ray *et al.*, (2004) employees' IT skills, organisation IT spending, shared knowledge, flexibility of IT infrastructure and service climate determine the performance of service organisation in the health and insurance industry. One can argue that the effect of Internet technologies are revealed in the product process level and the resource described under the RBV model are the most suitable perspective to add value and create SCA. From the above literature among the theories, there is a need to position the rationale of choosing the TAM over other models. The TAM constructs are more likely relevant to the study because they have direct and indirect effect on service organisation's employee behavioural intention to use online service delivery system. For that reason, there is potential for practical application in the development and management of online service delivery system.

3.8 TAM, TTF, E-GOVERNMENT SERVICES AND NATION BRANDING

Looking at the above TAM and TTF debate in chapter 3, e-governance and nation branding discussions in chapter 2, it is worthy to acknowledge that greater minds left their mark in these discussions. However, Figure 3.5 offers an integrated view on the way constructs and actors interplay in the process. Nevertheless, this integrated view can be an important contribution in light of the discussions on how theory of technology adoption in government department can become motivating factor to re-position the organisation and re-brand the country.

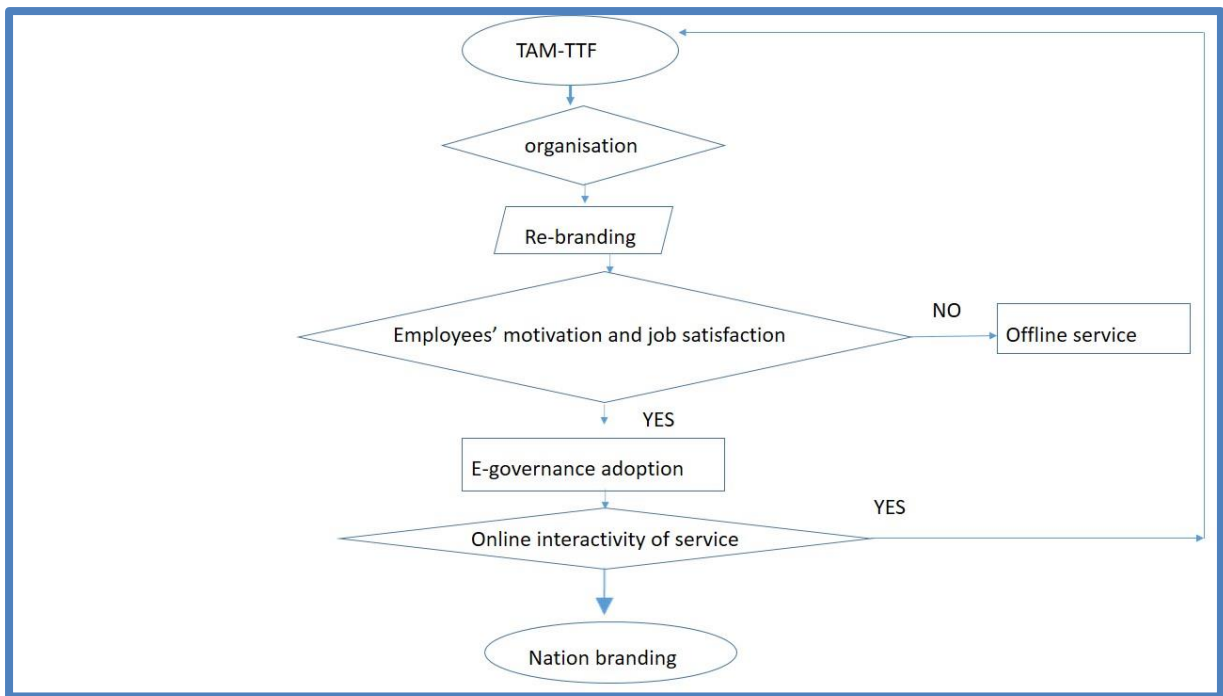


Figure 3.5: Internal customers' (employees) perception of e-governance adoption

In public service organisations, it is important for the management team to increase employees' productivity by adopting service-enabled technologies, which would allow employees to achieve their maximum potential (PWC, 2017). In business registration process, front-line employees have a direct responsibility on managing relationships with entrepreneurs, and resources allocated to maintain this relationship is a powerful factor for job satisfaction and motivation. In general, the consequences of a demotivated employee can be briefly explained in terms of absenteeism, substandard services, and high turnover rates. The aim of e-governance adoption is to motivate front-line employees in public service delivery, thus creates job satisfaction.

Motivation derives from the Latin word "*movere*", which means "to move" (Prezi, 2017). It is an internal force, dependant on an individual's needs which drive employees to achieve. It argued that that in order to understand employees' behaviour at work, managers and supervisors should be aware of the concept of motives, which will help "move" their staffs to act. According to Robbins (2001), motivation is a needs-satisfying process which means that when an employees' needs are satisfied or motivated by certain factors, they will exert superior effort toward attaining organisational goals.

Arguably, theories of motivation can be divided to explain the behaviour and attitude of employees at work (Hong Tan & Waheed, 2011). These include content theories, based on the assumption that employees have individual needs which motivate their actions, and theorists such as Maslow (1954), McClelland (1961), Herzberg (1966) and Alderfer (1969) are renowned for their works in this field. In contrast to content theories, process theories identified relations among variables such as technology and organisation re-branding efforts. The above make up motivation and involve works from Heider (1958), Vroom (1964), Adams (1965), Locke (1976), and Lawler (1973). However, the main focus in this research is Herzberg's theory of motivation. The rationale is that Herzberg's motivation theory, also known as the two-factor theory has received widespread attention of having a practical implications toward motivating employees in the service industry.

In 1959, Herzberg asked 200 professionals from manufacturing and service industries to describe their job experiences. Responses about good feelings were generally related to job content (motivators), which were associated with hygiene factors. Motivators included factors such as achievement, recognition, responsibility, advancement, available technology, perceived ease of use of thereof and training. On the other hand, hygiene factors were interpersonal relations, communication, salary, supervision, business process, policy and procedures (Herzberg, 1966).

However, a main point from Herzberg research was that he perceived motivational and hygiene factors to be separated into two different dimensions, which affect aspects of job satisfaction. The above was much different from the traditional approach of viewing job satisfaction and dissatisfaction as opposite ends of the same continuum. Arguably, hygiene factors prevent dissatisfaction but they do not lead to employee satisfaction. Nevertheless, they are necessary only to avoid bad feeling at work. On the other hand, motivators are the real factors that motivate employees at work (Hong Tan & Waheed, 2011).

Testing Herzberg's two-factor theory is not new. However, tests show different results depending on the industries. Some of the factors declared by Herzberg (1966) as hygiene factors are actually motivators in other research. The differences are due to the intensity of the labour requirement, business process, nature of offering, and

employment duration (Nave, 1968). Extensive criticism has emerged in making distinction between hygiene factors and motivators. While some factors have proved to fall accurately within the two groups, certain factors, such as ICTs and salary have proven ambiguous in the position as a motivator or hygiene factor.

3.9 SUMMARY

This chapter discusses Task-Technology Fit (TTF) and Technology Acceptance Model (TAM) in service organisation as the underpinning theories with which to describe the social phenomenon: online business registration adoption at the government Department of Trade and Industry (DTI) of Congo-Brazzaville as branding tool. The rationale behind the underpinning was not to repeat the literature. However, considering that e-governance is part of IS studies, thus the author used socio-technical approach to guide the study. The use of theory to underpin this study was motivated not only by its interpretative nature but also of the interplay between technical and non-technical factors which are involved in the process of technology adoption. The use of the underpinning is critical factor for successful research in doctoral level. In recent years, reviewers for conferences and journals draw more attentions and emphasis on how results and conclusions are reached in articles. It was point out that without underpinning theories, many research conclusions look speculative.

As a result, for many research articles are not accepted for publication. This is attributed to, mainly two factors: it is either the analysis of the data was not underpinned by theory, or the theory employed was not appropriate. Unlike in software engineering where improvisation and bricolage may work well as underpinning theory, sharing the view that individual's perceptions and attitudes towards a new online business registration system will be spontaneous; might be erroneous. This Flocinaucinihilipilification cannot be the case with online business registration, since its adoption is intended just to smoothen the service, improve efficiency, and effectiveness of service delivery.

Given the above, TAM and TTF were appropriate tools to guide the study because of the influence of DTI employees' behaviour towards acceptance of new technology, which in return, is stimulated by other factors. It is arguable that the reason for choosing technology acceptance theory in this study was to suggest a solution in the

business registration process and determine the merits of this workplace technology adoption in organisation's re-branding strategy. However, it became imperative to discuss the importance of theory in the field of information system (IS).

From the above, the chapter intends to synthesize and reflect upon the debate on theories and theorising in the IS field. As such, the key contribution is to inform the study about opportunities in theorising and putting the concept of theoretical and conceptual framework to work together. Through this debate, the study advances and supports the discipline's current strive towards more theoretical thinking and the increasing demand for theoretical contributions in the junctions of marketing and IS. The discourse around theoretical background between information and data in the field of IS covered three dimensions namely motivational background, conceptual foundation and terminological foundation.

In public service organisations, it is important for the management team to increase employees' productivity by adopting service-enabled technologies, which would allow employees to achieve their maximum potential (PWC, 2017). In business registration process, front-line employees have a direct responsibility on managing relationships with entrepreneurs, and resources allocated to maintain this relationship is a powerful factor for job satisfaction and motivation. In general, the consequences of a demotivated employee can be briefly explained in terms of absenteeism, substandard services, and high turnover rates. The aim of e-governance adoption is to motivate front-line employees in public service delivery, thus creates job satisfaction. Arguably, theories of motivation can be divided to explain the behaviour and attitude of employees at work (Hong Tan & Waheed, 2011).

These include content theories, based on the assumption that employees have individual needs which motivate their actions, and theorists such as Maslow (1954), McClelland (1961), Herzberg (1966) and Alderfer (1969) are renowned for their works in this field. In contrast to content theories, process theories identified relations among variables such as technology and organisation re-branding efforts. The above make up motivation and involve works from Heider (1958), Vroom (1964), Adams (1965), Locke (1976), and Lawler (1973). However, the main focus in this research is

Herzberg's theory of motivation. The rationale is that Herzberg's motivation theory, also known as the two-factor theory has received widespread attention of having a practical implications toward motivating employees in the service industry. The literature review covered major concepts in the field: service marketing. Much of this was usually achieved by reference to the most reviews. The theoretical analysis in this chapter was a step to analysing research theme for the purpose of stimulating feedback via research design and methodology discussed in **Chapter 4: Research approach.**

CHAPTER FOUR RESEARCH APPROACH

4.1 INTRODUCTION

This chapter explains research design and methodologies that were used to examine the determination of an online business registration model for re-branding DTI Congo-Brazzaville. This phenomenon was considered to be a social constructed one and was therefore assumed adopting ontologically subjective and objective position, which enabled the findings to be plausible. Hence a single case study methodology was used combined with survey to tease out the problem. This chapter then states reasons why these methodologies were selected, to gather data for the research questions. Targeted population, sampling size, and techniques that were employed for data collection and analysis are also discussed.

This descriptive research was conducted to understand management challenges associated with the adoption of an online business registration platform for DTI Congo. The applicability of new knowledge was couched in the frame of technology acceptance theory. To this end, literature study was conducted and additional information was elicited through discussions with industry experts and academics to inform the theory.

4.2 APPLICATION OF CONCEPTUAL FRAMEWORK

This study is to propose a normative model of online business registration for re-branding DTI Congo-Brazzaville, based on the underpinning. E-governance adoption under the lens of technology acceptance applies within limit inquiry and directs the attention of the researcher to critical features of the social phenomena under study. To emphasise that argument, the conceptual framework for this research was developed. That development indicates that the utilisation of scanners, printers, cell phones, smartphones, laptops, PCs and tablets to improve internal and external communication, bring service nearer to citizens, motivate employees, increase job satisfaction and to re-brand service as high quality in the public sector. The interaction with businesses and the public via the above-mentioned devices has the potentials to enable an online business registration platform to be a branding mechanism for government services.

4.3 RESEARCH METHODOLOGY

The nature of study dictated the use of triangulation, which is a combination of qualitative and quantitative research. Research methodology is “the systematic, methodical, and accurate execution of the design” (Babbie & Mouton (2001:74). Brynard and Hanekom (2006:35) distinguish between two basic research methodologies: quantitative and qualitative. However, qualitative methodology contains various research techniques, which are explained in the following section.

4.3.1 Use of qualitative methodology in this research

Due to the nature of the research problem (socially constructed), this research adopts a qualitative methodology as one of the approaches and epistemologically, draws from the works of Tshombe (2008). That qualitative research is often exploratory, used in an exploration of a subject area (such as a socially constructed phenomenon) in which a limited amount of knowledge only exists. Arguably, qualitative methodology refers to descriptive data, which does not involve measurement or statistics (George, 2005). Research techniques use in qualitative methodology include case studies, clinical methods, introspection, naturalistic observation, participant observation, interviews and focus groups.

According to Fellows and Leedy (1997:42), data collected in qualitative research tends to be complex. This often makes a meticulous analysis of data problematic. As an outcome, the objectivity of such data and analysis is often questioned. Hence, qualitative research is, from time to time referred to as suggestion, which generates research. This derives from the fact that qualitative research often precedes quantitative research. Qualitative research, in contrast to quantitative research, occurs within natural contexts such as a socially constructed phenomenon and focuses attention on the perspectives of such studies (Leedy, 1985:108). Qualitative findings may be so specific and context-bound, that they do not apply in other contexts (Leedy, 1985:108). This research sought to increase the knowledge generated from data collected from DTI Congo employees of Brazzaville and Pointe-Noire offices. Qualitative methods have been in use in philosophy, sociology, and history for centuries, and provide both advantages and disadvantages, which are discussed in detail in the section below.

4.3.1.1 Advantages and disadvantages of using qualitative methodology

Ontologically and epistemologically, the view is that adopting qualitative methodology and techniques will provide various advantages. The first advantage was its natural setting. This advantage highlights the fact that there was a visit to the respondents at their duty stations in order to obtain in-depth insights regarding online business registration issues. The second advantage of qualitative methodology is its “*emic*” aspect, which is based on the actor’s view. The research was driven by the lenses of e-governance adoption within the specific context related to the service marketing concept of nation branding, rather than attempting to generalise theories to the research population. The inductive process is the third advantage of qualitative methodology. This advantage made the use of qualitative method “main instrument” within social phenomena under study.

It is argued that qualitative methodology has also some disadvantages. Researchers voiced that qualitative method is time-consuming and highly subjective (Learn Higher, 2011). It was apparent that respondents’ self-reference criterion and cultural differences did reinforce subjectivity in the qualitative studies. Considering culture as a barrier, effective interpersonal skills were used. Thus, qualitative methodology used in this study necessitated a further discussion on the rationale of research techniques, which were utilised, and these are discussed in the next section.

4.3.2 Research techniques in qualitative methodology

Focus group, observation, case studies, clinical methods, introspection and interviews are the most used techniques in qualitative methodology (Family Health International, 2011: 2). However, each technique applies in a given context. Arguably, participant observation technique is appropriate for collecting data on naturally occurring behaviours of respondents. Preliminary participant observation was done in the form of field research when the researcher attempted to register a new business at the DTI Congo in Brazzaville (Bryman & Bell, 2011:270) and the lengthy process enabled the researcher to record the data. In two days of the week: Monday and Thursday, the researcher noted that 24 entrepreneurs walked in to enquire for business registration, from which 14 were males and 10 females.

The researcher observed challenges faced by DTI Congo employees in the brick-and-mortar business registration process. It was noted that inbound logistics is associated with the receipt and dissemination of business permit application submitted by the customer (potential service user). In the first step, receiving business permit application and forwarding such application to the appropriate directorates could take 3 to 10 days. During the second step, which is operations, the relevant directorate at the registrar office is concerned with inputs evaluation, which would determine whether the output is satisfactory, or not. This assessment and manager's signature often takes 5 to 15 days. The third step of outbound logistics consists of storing granted certificates of incorporation, and collection and distribution of the outcomes; which would take 2 to 3 working days. The fourth step, which is related to the marketing activities of the registrar, would be associated with the availability of front office staff to help customers in collecting the outcomes only during business hours.

When customers come to inquire for the outcomes, front office staff inform applicants whether the certificate has been granted or not. If it was denied, they friendly explain the appeal process and the way in which customers could acquire the product (business permit). The rationale was to experience what it is like when there is no other alternative to register a business but to follow the only lengthy and bureaucratic process of traditional business registration. The researcher did not observe the experiences of new business permit applicants as a detached outsider, rather experienced them with them as insider in the process (Lofland, 1971). The rationale was to experience what it is like when there is no other alternative to register a business but to follow the only lengthy and bureaucratic process of traditional business registration.

This preliminary observation enabled the researcher to unravel the meaning and significance that new business permit applicants attach to their daily activities from application to registration (Welman *et al.*, 2011: 195). In-depth interviews are optimal for collecting data on individuals' personal histories, perspectives, and experiences, particularly when sensitive topics are explored. Considering that the study objectives, interviews were not used. The rationale was to avoid effort duplication of interviewing same respondents who filled the questionnaire.

Focus group meetings are known to be effective in data collection. The focus group technique was used in this study as Brace (2004:5) argues that respondents may have useful information that is not excised by the questions in the survey questionnaire.

Selected according to their level of IT awareness and position, six DTI Congo full-time employees were invited for focus group discussions in order to gain a broader understanding of the research problem that was identified. In the questionnaire, the focus group questions ranged from 4 to 8, which were discussed by six participants under the researcher's moderation. Another reason is that focus group enabled the group to find information that the researcher would not be able to access, which was useful because it allowed a space in which respondents gathered and created a meaning for themselves, rather than individually. Case study technique was used and is discussed later in this chapter while, clinical and introspection techniques were not used. Quantitative methodology is discussed next.

4.3.2 Quantitative methodology

Quantitative methodology is associated with analytical and statistical data. The purpose of using quantitative methodology in this study was to arrive at a universal statement (Schaub, 2008:11). Arguably, quantitative research methodology relies on measurement and uses various scales (Bless, Higson & Kagee, 2006: 44). The study used quantitative techniques which consisted of a coding system by which different research variables were compared. The coding system enabled the researcher to use statistical inferences to process data and generalise findings (Grant, 2005:7-12). The next section explains its relevant advantages and disadvantages.

4.3.2.1 Advantages and disadvantages of quantitative methodology

The two main advantages of quantitative methodology are easy generalisation of research findings and data objectivity (Terre Blanche, Durrheim and Painter, 2009: 132). It is agreeable that research findings generalisation depends on the way in which research sample was selected; and the extent to which research results are objective depends on the way in which the problem that is studied has been conceptualised and measured (Terre Blanche *et al.*, 2009:132). Further, considering that quantitative

methodology enabled the researcher to reach out large number of respondents, it involved little physical contact with them Gray (2009:165); hence it gave respondents enough time to think about the answers to the questionnaire. However, one of the disadvantages is that not only can a questionnaire be costly when dealing with large numbers of respondents, but it also limits them to only answer questions, which were asked. The next section focuses on the quantitative techniques which were utilised to collect data.

4.3.2.1 Research techniques in quantitative methodology

Main research techniques employed in quantitative methodology include surveys, laboratory experiments, formal methods and numerical methods such as mathematical modelling (Jenkins, 2009). Surveys, which were used in this research, were associated with as observation, preliminary investigations, quantitative analysis and questionnaires.

Babbie and Mouton (2001:259) argue that a questionnaire is “*a formal list of questions designed to gather responses from respondents on a particular topic under study*”. Given the above, the study used a survey questionnaire to collect data. The survey questionnaires was developed around themes including the potentials of online service adoption to re-brand and re-position the organisation, service marketing in public organisation and electronic channels, e-governance and service delivery implications at DTI Congo, benefits and challenges of e-governance adoption at DTI Congo and e-governance adoption and employees behaviours and perception.

The survey theme was based on the main question: How does the DTI Congo-Brazzaville intend to improve business registration using online business registration technology as a branding tool? However, sub-questions were also used:

1. What is the level of readiness for online service process at DTI Congo?
2. How does online business registration platform of DTI South Africa influence the inception of DTI Congo model?
3. How can DTI Congo protect e-government classified information from Internet criminals?
4. What are the benefits and challenges of online service adoption at DTI

Congo?

5. How can online service adoption reduce DTI Congo's value chain cost?
6. What is the impact of e-governance on nation branding strategy?
7. Why online service delivery model is necessary for DTI's worldwide?

The questions, which used "yes" and "no" answers were assigned numbers (1=yes and 2=no); whereas statement questions, which used a five-point Likert scale, were assigned numbers of (1-strongly agree, 2-agree, 3-disagree, 4-strongly disagree and 5-not sure) to collect data on research variables that were processed in SPSS 22. However, it is worthy to highlight that because respondents did not attribute any significance to scale "5-not sure", the researcher had no other choice but to discard it in data presentation in order to avoid repeating null value in all tables, (IS City, 2010). Section 1 questions ranged from 1 to 3. The data that was collected in section 1 was used for respondents' profiling purposes only. Section 2 questions ranged from 4 to 55.

Questionnaire was distributed to 260 DTI Congo full-time employees, asking each of them 55 questions. To avoid staggering with 14300 answers, the researcher used SPSS data analysis involving the reproduction of data from unmanageable details to manageable summaries in order to reach meaningful conclusions (Babbie & Mouton, 2009: 459). Part-time and contractual employees were not included because it is difficult to motivate them to live brand promise because of their temporary commitment to the organisation (Abubakari, 2016). Statistical analysis of the data in Statistical Package for Social Science (SPSS) was used to produce research findings. Next section highlights research strategy.

4.4 RESEARCH STRATEGY

Yin (2003:1) demonstrates research strategy that applies to case studies, which are used in situations aiming to add new knowledge in organisations. The researcher considered three different research strategies in this research. These were experimental methods, surveys, and case studies (Tshombe, 2008:157). Each of the three strategies requires both quantitative and qualitative methodologies combined. However, the preference for a particular research strategy depends on the research questions, the extent of control over the phenomenon under study, and whether the

phenomenon was historical or contemporary (Yin, 2003:5). Yin further states that, such strategies are advantageous when the research goal is to describe the incidence or prevalence of phenomena, or when the research goal is predictive about certain outcomes. Research design logic, which guided the researcher to define methodology and collect data from respondents, is illustrated Figure 4.1 below.

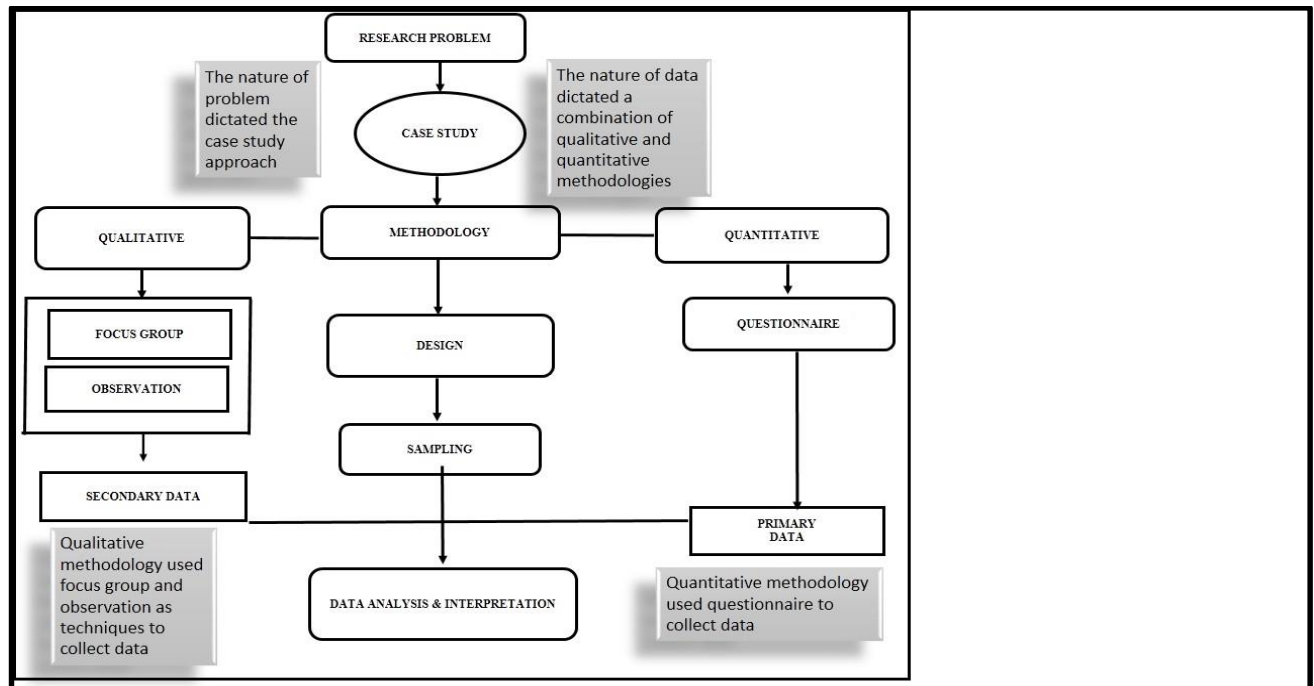


Figure 4.1: Research design logic

(Source: Tshombe, 2008:157)

4.5 CASE STUDY DESIGN

This research used case study design to describe the data as evidence of the conceptual framework that was developed. According to Yin (2003:19) research design is the logic that links the data, to be collected, and from which a conclusion may be drawn. This study tries to understand management actions, employees' role in quality service delivery aimed at promoting nation branding strategy (Onojaefe, 2009). However, the application of case study methodology in marketing is not new. Next section elaborates on the historical background of case applications.

4.5.1 OVERVIEW OF CASE STUDY METHODOLOGY

Early academic research in anthropology conducted around 1900 used case study methodology. From early accounts of journeys, systematic investigations in the form of field studies emerged, with participant observation as the predominant method of data collection (Johansson, 2015). In the course of time, disciplines such as medicine, social work and psychology adopted case study methodology and labelled it *case work* or *case history*.

With the dominance of logical positivism after the World War two (WWII), social sciences favoured positivism and quantitative methodologies. Such dominance introduced case study methodologies owing to the intensive applications of surveys and statistical methods to collect consumers' opinions about product experience. However, the contention of methodologies paved new vista. Differing methodologies led to a distinction within the social sciences between positive and anti-positivism cultures. Thus division in terms of methodologies became the main characteristics of social sciences; which reflected the birth of existing tensions between the natural sciences and humanities (Bill, 2001).

Around 1950 logical positivism dissolved, but within the social sciences the methodology of the natural sciences was still emulated. During its emergence, housing research, which was based on the model of the social sciences, was very much dependent on positivistic methods. This was a consequence of a fear of not being scientifically acceptable (Linda & David, 2002). Winch (1958) and Wright (1971) criticised the methodological influence of the natural sciences on the social sciences. The outcomes of their criticism generated the second generation of case study methodology in late 1960s. It is argued that the first type of methodology within the second generation of case studies was Grounded Theory, which merged qualitative and quantitative data analysis (Glaser & Strauss 1967). The applications of Grounded Theory application resulted in inductive methodology that was based the use of detailed procedures to analyse data. Yin (2003) transferred experimental logic into the field of naturalistic inquiry and combined it with qualitative methods. From Yin to current, case study methodology has been widely used in various fields including marketing. Next sections discuss characteristics features of case study methodology.

4.5.2 CASE STUDY METHODOLOGY: CHARACTERISTICS

The aim of case study methodology is to make the case explicit. Case study methodology addresses issues of case selection, findings validity while advocating triangulation. Arguably, triangulation ensures the validity of case study research, hence data collected using more than one research techniques are more likely to be valid (Yin, 1984). The way case for study is selected does matter. It happens that the case for study is given to the researcher: intrinsic case for study. In such a case the researcher has no interest in generalising the research findings, rather focuses on understanding the case. However, should the findings be generalised, it is the duty of the audience in *naturalistic generalisation* (Wright, 1971).

Purposefully selected case for study is the alternative to the above-mentioned intrinsic case for study. Purposefully selected case study also known as analytically selected case for study is selected in virtue of being information-rich, critical, revelatory, unique or extreme such as this current one, there should be an interest in generalising the findings (Yin, 1984). Focusing on findings generalisation the main issue from which case study methodology has been most questioned in the marketing field. Arguably, generalisations from case studies are not statistical, rather analytical. That meant they are based on the reasoning principles: deduction, induction, and abduction (Babbie & Mouton, 2001).

In the deductive principle generalisation, the procedure is similar to an experiment. That meant a hypothesis was formulated, and testable consequences were derived by deduction. In this study, the findings were compared from the underpinning theory, case study perspectives and the empirical facts. In so doing, it was possible to verify or falsify the applicability of e-governance adoption at the DTI. The nature of results informed the researcher that it is possible to define the domain within the technology acceptance theory (Yin, 1984). In order to avoid concluding from single transitory of data, the study used a second principle of data generalisation: induction. Given the case study, this was done through inductive theory-generation, or conceptualisation, which was based on data from within a case study: DTI Congo. The third type of generalisation that was not considered in this study is the principle of abduction. Abduction is the process of facing an unexpected fact, applying known rules or those created for the circumstance (Yin, 2003). The rationale of not using abduction reasoning was to stick the path of research objectives and questions.

4.5.3 CASE STUDY BOUNDARIES

The research intends to evaluate the applicability of online business adoption at DTI Congo. This research has limited itself to propose a model of e-governance (online business registration) in Congo-Brazzaville. The country is in the central African region, ranked 185th for the ease of doing business (Yétéla, 2012). The research question evaluation was made through CFBAP, which is the only Congolese governmental agency in charge of business registration (Nkou, 2014). The CFBAP will clarify this research if the DTI Congo has to adopt online business registration system to proactively respond to empower employees in service delivery process. The data was collected at CFBAP offices of Brazzaville and Pointe-Noire. The rationale is that they are nationwide leading units of the CFBAP reporting directly to the DTI Congo.

4.6 RESEARCH PROCESS

The research purpose was to put forward a normative marketing model of online business registration for re-branding Congo vis-à-vis its internal customers (employees). Thus, to understand what is going on, the study was based on the inductive reasoning and deductive reasoning principles. Lith (2011:1-2) states that inductive reasoning goes from the specific to the general, whereas deductive reasoning goes from the general to the specific. A careful scrutiny of inductive reasoning, which included various empirical factors such as respondents' attributes, online business registration, value chain and nation branding enabled the researcher to explain what is going on. Furthermore, deductive reasoning in the theme of DTI and e-governance adoption, equipped the researcher to address the how of the study.

Arguably, inductive and deductive reasoning methods are best utilised when the researcher attempts to describe an empirical problem based on "*what*" questions and "*how*" the solution to the problem will be implemented (Lith, 2011:2). In addition, online business registration for department of trade and industry from countries all over the world is an empirical problem, was described according to "*what*", and resolved according to *how*. From an interpretive point-of-view, the above reasoning enabled the researcher to make sense of statistics inferences based on relevant data, which was collected (New York Education, 2011:2-3). Data collection is discussed next.

4.7 DATA COLLECTION

Arguably, data collection is a process of gathering and measuring information on variables of interest in an established systematic way that enabled the researcher to answer the research questions in line with research objectives (Dhhs, 2011:1). Data collection was made possible by the availability of respondents in supplying the researcher with relevant data to address the research problem that identified. Primary data was collected from DTI Congo employees by using focus groups, questionnaires and observation. Secondary data were sourced from relevant literatures, which were reviewed for consistency and validity of information. It is arguably true that improper data collection leads the researcher to pursue fruitless avenues of investigation.

However, it was necessary in this research to conduct a pilot study. Recently, Teijlingen and Hundley (2002:33-36) argue that even though conducting a pilot study does not guarantee success in the main study, it does increase the likelihood of research success. Therefore, the pilot study, which is discussed in the next section, fulfilled a range of important functions and provided the researcher with valuable insight.

4.8 PILOT STUDY

It is agreeable that no matter how carefully a data collection instrument such as a questionnaire is designed, there is always a possibility of errors owing to human nature (Babbie, 2010: 256). To ensure that there was no question that respondents could not answer, pre-testing of questions took place in Cape Town and Brazzaville. Questionnaires were distributed to ten Congolese: 5 DTI employees and entrepreneurs. Babbie (2010:256-260) argues that it was not essential for the ten pre-tested subjects to comprise a representative sample, although the researcher used people to whom the questionnaire was at least relevant. The pilot study revealed that respondents recommended that names of focus group participants and branch managers should be removed from the questionnaires for privacy. After due consideration, the said recommendation were attended to.

4.9 POPULATION AND SAMPLE SIZE

Arguably, the large group of data that is of interest to a researcher is called the research population, and the small portion of individuals who participate in the study is called the sample (Gravetter & Forzano, 2009: 128). For purposes of this study, the

targeted research population comprised Congolese DTI employees who live in Brazzaville and Pointe-Noire. Targeting DTI employees both males and females who live Congo-Brazzaville, where the data was conducted, tactically saved time and correspondence costs compared to a target population that would be scattered in different cities of another country.

For purposes of cost reduction, speed and research greater scope (Columbia education, 2010:6), this study sample targeted DTI Congo's full-time employees from the part-time and contractors. The rationale was that job satisfaction tended to be a more homogeneous factor for full-time employees who are more committed to online business registration adoption than part-time and subcontractors. From DTI Congo full-time employees, a sample of respondents was drawn to improve the reliability of the research results (Brynard *et al.*, 2006:56). According to Bryman and Bell (2011:176), in probability sampling, each unit in the research population has a known chance of being selected; therefore, a representative sample is more likely to be the outcome. The rationale of using probability sampling was to keep sampling error to a minimum; hence a sample size of N = 260 DTI Congo full-time employees from the total of 800 was used as illustrated in Figure 4.2 (Stat Trek, 2010).

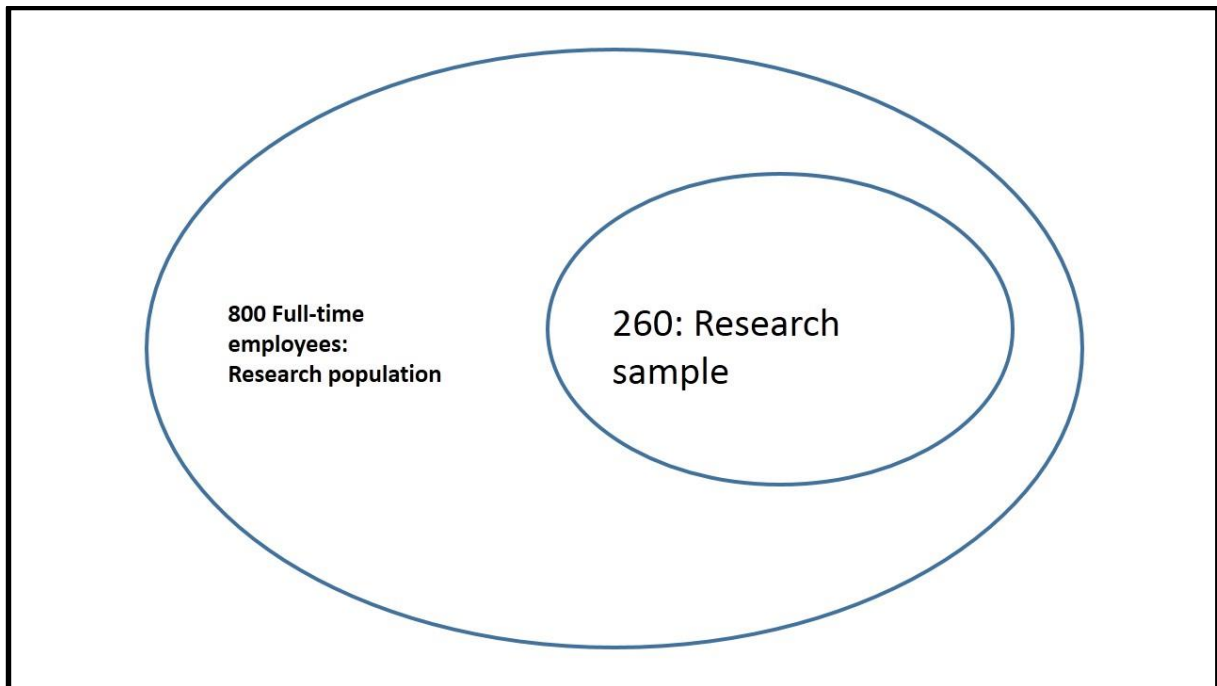


Figure 4.2: Sample size

4.10 RESEARCH QUESTIONS

The research questions were inspired by literature study, discussions with industry practitioners and selected numbers of academics. The literature survey informed the underpinning theory and the discussions yielded useful information used to understand that there was indeed a lack of adequate understanding how online service adoption can re-brand organisation vis-à-vis to its internal customers (employees). There was also little basis to understand online business registration importance of management competency. This competency is particularly important in managing relationships with front-line employees. Thus, the research questionnaire for this study was developed from the following questions:

1. What is the level of readiness for online service process at DTI Congo?
2. How does online business registration platform of DTI South Africa influence the inception of DTI Congo model?
3. How can DTI Congo protect e-government classified information from Internet criminals?
4. What are the benefits and challenges of online service adoption at DTI Congo?
5. How can online service adoption reduce DTI Congo's value chain cost?
6. What is the impact of e-governance on nation branding strategy?
7. Why online service delivery model is necessary for DTI's worldwide?

In line with research questions, research hypotheses were drawn:

H1: Employees' data safety is positively related to e-governance website usage, which in return is catalytic to quality service delivery;

H2: considering the benefits of e-governance, DTI Congo's potential online business registration system can transform service process, and add value;

H3: customer's satisfaction is positively related to quality service delivery (internal customer's happiness), hence; service-enabled technology adoption in public service organisation can re-brand and re-position it vis-à-vis to internal customers.

Figure 4.3 integrates research hypotheses, e-governance adoption, internal customer (employees) satisfaction and organisation re-positioning and re-branding.

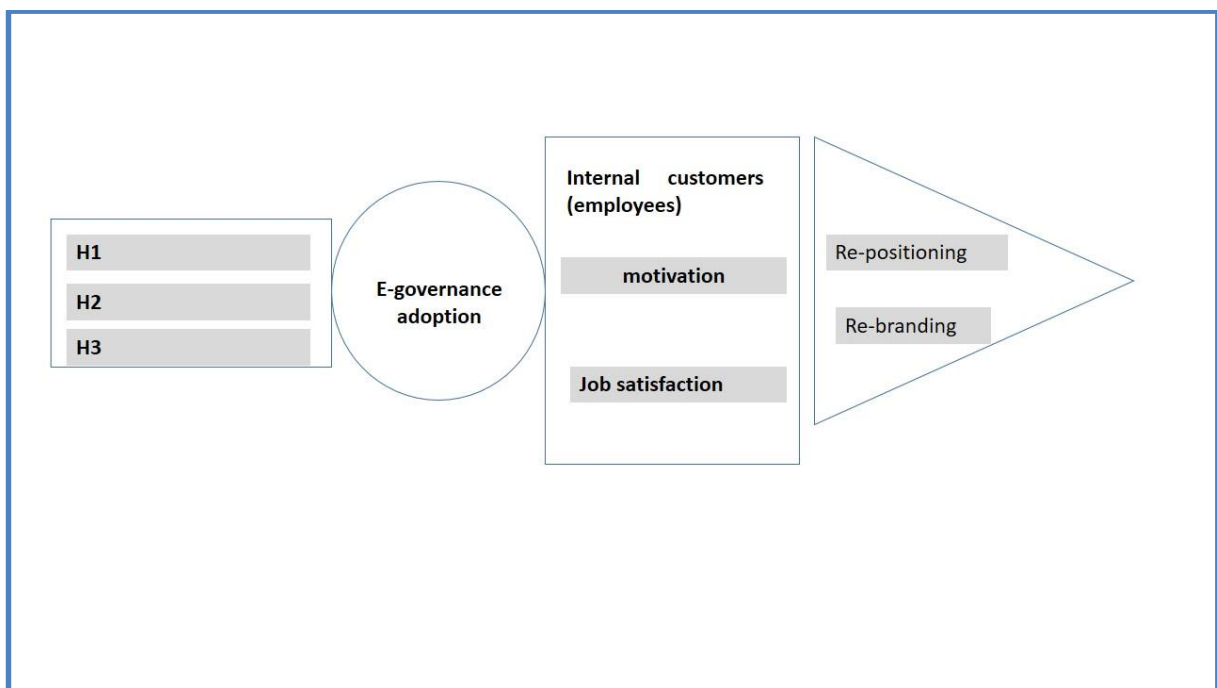


Figure 4.3 Interplays between constructs in e-governance and re-branding

4.11 DATA COLLECTION METHODS ASSESSMENT

Accuracy, precision, and reliability provide a springboard for data validity. Joppe (2000:1) argues that the extent to which research results are consistent over time is referred to as reliability, and if the study can yield the same results under a similar methodology, then the research instrument is considered to be reliable. At doctoral level, one of the concerns is the reliability and validity of data. Critics argue that when judged by the standards of reliability, qualitative research is often criticized both for lacking structure and system, and for an inability of the researcher that uses this approach to generalise beyond a small number of cases (Henn, Weinstein & Foard, 2009: 209). Similarly, Golafshani (2003:597-599) argues that validity determines whether the research truly measures that which it was intended to measure, or how truthful the research results are. In the other hand, the researcher underscored that the definitions of reliability and validity in quantitative research reveal two strands: firstly, with regard to reliability, whether the result from the study is replicable, and secondly, with regard to validity, whether the means of measurement are accurate and whether they are actually measuring what they are intended to measure. Hence, to maintain reliability, accuracy and to ensure validity of data, the same set of questions was asked and discussed in a focus group meeting, which was held via Skype. Finally, the correct sampling techniques and procedures were used to ensure that valid data was collected in order to achieve valid results.

4.12 SUMMARY

This descriptive research was conducted to understand management challenges associated with the determination of an online business registration system re-branding DTI Congo. The applicability of new knowledge was couched in the frame of technology acceptance as underpinning theory aimed at promoting e-governance adoption for re-branding DTI Congo. To this end, a literature study was conducted and additional information was elicited through discussions with industry experts and academics to inform the theory.

The development of conceptual framework supports both deductive and inductive ideas that improvisation, as scientific theory, is important for the development of relational statements in the area of online branding. Considering that the basic goal of

science is to validate theory, further academic discussions with IS experts in the areas of service process and service marketing policies were engaged. The nature of study dictated the use of triangulation, which is a combination of qualitative and quantitative research. Figure 4.3 illustrating the interplays between constructs in e-governance and re-branding guided data collection techniques namely survey questionnaires, focus group and observation.

Preliminary participant observation was done in the form of field research when the researcher attempted to register a new business at the DTI Congo in Brazzaville and employees' under-equipment in service delivery process enabled the researcher to record the data. The rationale was to experience what it is like when there is no other alternative to register a business but to follow the only lengthy and bureaucratic process of traditional business registration. The focus group technique was used in this study because some respondents may have useful information that is not excised by the questions in the survey questionnaire.

Selected according to their level of IT awareness and position, six DTI Congo full-time employees were invited for focus group discussions in order to gain a broader understanding of the research problem that was identified. The research strategy utilised case study because it is often associated with situations aiming to add new knowledge in organisations. There are three different research strategies namely experimental methods, surveys and case studies. Yet, each of the three strategies requires both quantitative and qualitative methodologies combined.

However, the research question evaluation was made through CFBAP, which is the only governmental agency mandated by DTI Congo for business registration. The CFBAP will clarify this research if the DTI Congo has to adopt an online business registration system to re-brand itself vis-à-vis internal customers (employees). The data was collected at CFBAP offices of Brazzaville and Pointe-Noire. The rationale is that they are nationwide leading units of the CFBAP reporting directly to the DTI Congo. The targeted research population comprised DTI Congo full-time employees who live in Brazzaville and Pointe-Noire, including males and females. For purposes of cost reduction, speed, and greater research scope, this study targeted DTI Congo full-time employees from the rest of part-time and sub-contractors. The rationale was

that job satisfaction tended to be a more homogeneous factor for full-time employees who are more committed to the organisation business strategy. From DTI Congo full-time employees, a sample of respondents was drawn to improve the reliability of the research results.

In probability sampling, each unit in the research population has a known chance of being selected; therefore, a representative sample is more likely to be the outcome. The rationale of using probability sampling was to keep sampling error to a minimum; hence a sample size of $N = 260$ DTI Congo full-time employees from the total of 800 was used. This therefore creates a platform for a detailed presentation of findings that is presented in the **Chapter 5: Data analysis and interpretation**.

CHAPTER FIVE DATA ANALYSIS AND INTERPRETATION

5.1 INTRODUCTION

This chapter documents the results of the survey and conducts analysis and interpretation of the research findings based on the case study. The objective of this chapter is to conduct a comparison of the study's empirical results with existing literature and theories regarding the case study organisation. These discussions provide a detailed explanation of respondents' perceptions of an online business registration system within service provider's perspective, and it locates specific instances of value chain determinants and branding. It provides an overview of online business registration value adding factors namely transformational innovation, employees' empowerment, government department re-branding.

Figure 3.3, which combines TAM and TTF, and Figure 4.3 indicating the interplays between constructs in e-governance and re-branding were major tools to describe the phenomenon. The results of the data analysis of the case study were divided into two categories, quantitative and qualitative. Qualitative data represented the information collected during the focus group meeting with six senior managers from the major DTI Congo offices of Brazzaville and Pointe-Noire. However, the quantitative data was used to project estimates in the terms of re-branding and online business registration adoption at CFBAP. During the fieldwork, the researcher used survey questionnaires to collect data. The measuring instrument, chosen, used the Likert Scale of Response and was employed in discussion with statisticians at CPUT (Babbie & Mouton, 2001). However, the case study is summarised before progressing to the detailed discussion and analysis of findings in the next sections.

5.2 CASE STUDY: CONGOLESE DEPARTMENT OF TRADE AND INDUSTRY

Le Ministère du Commerce et des approvisionnements refers to the Congo-Brazzaville Department of Trade and Industry (DTI). The DTI Congo claims to be in the junctions of all economic activities of Congo-Brazzaville. It also oversees the promotion of e-governance adoption in other government department nationwide (*Ministère du Commerce*, 2014).

However, to lighten DTI Congo's duties, the Congolese government created the Center for Business and Administrative Procedures (CFBAP): *Centre de Formalités des Entreprises (CFE)* under decree n° 94-568 of 10 October, 1994 and modified by the decree n° 95-183 of 18 October, 1995. Though DTI Congo-Brazzaville's mission includes promotion of business and e-governance, its Website in Figure 5.1 does offer only generic information to the public.



Figure 5.1: Current DTI Congo e-governance website

(Source: *Ministère du Commerce*, 2015)

Recalling from the section 2.8.1 related to stages of e-governance, it was argued that e-governance adoption passes through different phases namely computerisation, networking, online presence and online interactivity. In the *computerisation phase*, with the availability of personal computers (PCs), most of government departments including DTI Congo are equipped with computers, which enable word processing and data processing. The *networking phase* is characterised by the fact that some units at DTI Congo are connected through a hub leading to sharing of information and flow of data between DTI Congo and CFBAP (The World Bank, 2017). In the *online presence phase*, characterised with increasing internet connectivity, a need was felt at DTI Congo for maintaining a presence on the Web through its Website. However, DTI

Congo Website contains information about the organisational structure, contact details, reports and publications, objectives and vision statements.

Given the above, DTI Congo has reached the first, second and third stage of e-governance (computerisation phase, networking phase and online presence phase). However, the final stage of e-governance: *online interactivity* is not yet reached at DTI Congo. Recalling from sections 3.4, it is agreeable that online interactivity phase at DTI Congo is positively related to TAM and TTF based on the PEOU principles (Klopping & McKinney, 2004). Online interactivity stage is a natural consequence of online presence, which opens up communication channels between government departments and the citizens. The main aim at this stage is to minimize the scope of personal interface with government departments by providing downloadable forms, instructions, acts and rules (Smith & Blundel, 2014).

5.2.1 CENTRE FOR BUSINESS AND ADMINISTRATIVE PROCEDURES

The Centre for Business and Administrative Procedures (CFBAP)'s mission includes continuous evaluation of the business environment and simplification of business registration in Congo-Brazzaville. Beside the DTI Congo and the Ministry of SMEs, CFBAP's administrative stakeholders include the Department of Labour (DoL), the Taxation Office, the High Court, the National Centre of Statistics (NCS), the Social Security Department (SSD), the trade unions, and international institutions such as the World Bank and the International Monetary Funds (IMF). Business registration services in Congo-Brazzaville are sub-divided into three sections. The first section is for new business registration, the second deals with modification of legal status of an existing business and the third is about cancelation and de-registration of business. In the first section of new business registration, which is the main interest of the study, the application should include the followings as indicated in Table 5.1.

Table 5.1: Documents required to register business

No	Natural person	Corporation
01	Birth certificate or any identification document	2 certified copies of corporate status
02	Long stay Visa (for foreigners)	2 copies of capital subscription declaration
03	Marriage certificate (if applicable)	2 copies of management team list
04	Police clearance	2 police clearances for each person in the list
05	Permanent residence (if applicable)	Corporate name
06	Banking details	Banking details
07	Copy of lease agreement	Investment, job and environment strategy
08	Act of acquisition (if applicable)	Provisional operating account for the 3 years
09	3 passport format pictures	Registration fees
10	Business name (must differ from applicant's)	Equipment strategy
11	Business registration fees	Lease agreement
12		3 passport format pictures for each applicant
13		List subject to change based on business nature

(Source: Yétéla, 2012)

In Congo-Brazzaville, the Act N° 36-2011 of 29 December 2011 related to financial regulations of 2012 fixes business registration fees for citizens and foreigners. However, Section 9 of the Act N° 36-2011 of December 29 2011 stipulates that citizens and foreigners are subjected to business fees as described in Table 5.2.

Table 5.2: Business registration fees classification in Congo-Brazzaville

No	Nature of transaction	Fees in \$USA
01	Close Corporation (CC)	200.00
02	Corporation (Pty)	600.00
03	Capital Company (CC Pty)	1,000.00
04	Re-registration or modification	0.00
05	Non-EECAS business pay plus 1% of minimum capital	2,000.00
06	Agricultural and marine transport business get 50 % discount	Flexible

(Source: Yétéla, 2012)

Arguably, paying relevant business registration fees at the CFBAP office is just one step within the process. Such fees only enable the registered business to have unique business numbers (Yétéla, 2012). A study conducted by PMC Cabinet (2006) about investment barriers in Congo-Brazzaville reveals that before being operational, new businesses should comply with further requirements stipulated in Table 5.3.

Table 5.3: Further compliance after business registration

No	Requirement	Where to apply for	Cost in \$USA
01	Notary Business Rules	Notary	Pty: 750.00
			CC Pty: 1,000.00
02	Notary subscription deed	Notary	2 % of capital
03	Business rules registration	Taxation office	Pty: 3 % of capital + 1.00 for each page
			CC Pty: 3 % of capital + 10.00 for each page
04	Foreigner's Identification card	Immigration	210.00
05	Classification in newspaper	Local newspaper	100.00
06	Regulated activity permit	Offices	Flexible
		Forest	4,000.00
		Mines	1,000.00
		Geology	2,000.00
		Fishery	Flexible
		Construction	405.00
		Tourism	90.00
07	Business start-up statement	Labour Department	Flexible
08	Investment chart purchase	National Investment commission	General: 1,000.00
			Special: 500.00
			Abstracted: 200.00
09	Work permit	ONEMO	205.00
10	Importation license	DTI	0.00

(Source: PMC Cabinet, 2006)

5.2.2 RE-BRANDING THE CFBAP

In line with Figure 4.3 indicating the interplays between constructs in e-governance and re-branding, it is revealed that CFBAP is merely configured as a business formality Centre collecting tax and business registration fees on behalf of the DTI Congo with little emphasise on employee satisfaction, motivation, improved working conditions, empowerment or brain retain. Debate in sections 2.7.3 about strategies for delivering service quality through people points that a complex combination of strategies is needed to ensure that employees in service organisation are empowered, motivated to deliver quality services. These strategies for enabling service promises are often referred to as internal marketing for re-branding the organisation internally. Building a customer-oriented, service-minded workforce, an organisation must hire the right people, develop people to deliver service quality, provide the needed support systems, and retain the best people (Chen & Yu, 2017).

In public service organisations, it is important for the management team to emphasise on employee satisfaction, motivation and productivity by adopting service-enabled technologies, which would allow employees to achieve their maximum potential. The above recalls the debate in section 3.8 about Herzberg's theory of motivation. Herzberg argues that Motivators included factors such as achievement, recognition, responsibility, advancement, available technology, perceived ease of use of thereof and training. On the other hand, hygiene factors are interpersonal relations, communication, salary, supervision, business process, policy and procedures. Failing to adhere to the above positions DTI Congo at the bottom of the pile when it comes to the ease of doing business and nation brand ratings. This lower rating is cause for concern especially as there is growing awareness that Congolese public service organisation' s inability to compete globally spells ruin. The consequences of a demotivated employee can be expressed in terms of absenteeism, substandard services, and high turnover rates. The aim of e-governance adoption is to motivate front-line employees in public service delivery, thus creates job satisfaction.

Recalling from sections 2.7.3, it can be argued that hiring the right people in service organisation is crucial to deliver service quality effectively. Considerable attention should be focused on recruiting and hiring service employees who are competent, competitive with conviction that the organisation is their preferred employer.

Developing people to deliver service quality referred to growing and maintaining a workforce that is customer oriented and focused on delivering quality. Service organisations including CFBAP should develop their employees to deliver service quality. That is, once it has hired the right individuals, the organisation should train and work with these employees to ensure service performance. The training should focus on technical and interactive and IT skills, employees' empowerment and team work (Chen & Yu, 2017).

Providing much needed support systems would enable employees to be efficient and effective in their jobs. Retaining the best people should be CFBAP's mission, hence employee turnover can be detrimental to the organisation, employee morale and overall service quality. From the above Randhawa and Scerri (2017) argue that organisation that fails to innovate in service delivery put themselves at great risk of brand deficiency. Debate in sections 2.7.4 about service innovation design stipulates that new service development processes have its merits in adopting new technology as compared to traditional approach.

5.2.3 RESEARCH HYOTHESES

The main research question was: How does the DTI Congo-Brazzaville intend to improve business registration using online business registration technology as a branding tool? The research sub-questions were:

1. What is the level of readiness for online service process at DTI Congo?
2. How does online business registration platform of DTI South Africa influence the inception of DTI Congo model?
3. How can DTI Congo protect e-government classified information from Internet criminals?
4. What are the benefits and challenges of online service adoption at DTI Congo?
5. How can online service adoption reduce DTI Congo's value chain cost?
6. What is the impact of e-governance on nation branding strategy?
7. Why online service delivery model is necessary for DTI's worldwide?

Given the above questions, research main objectives, research hypotheses were developed as indicated 4.3 in a form that establishes basis for testing statistical significance.

H₁: Employees' data safety is positively related to e-governance website usage, which in return is catalytic to quality service delivery;

H₂: considering the benefits of e-governance, DTI Congo's potential online business registration system can transform service process, and add value;

H₃: customer's satisfaction is positively related to quality service delivery (internal customer's happiness), hence; service-enabled technology adoption in public service organisation can re-brand and re-position it vis-à-vis to internal customers.

5.3 QUANTITATIVE RESEARCH DATA PROCESSING

Following after collection, the researcher processed the questionnaires by coding, which consisted of assigning each research variable a value and a label in an SPSS 22 database. Hence, it was necessary to identify the implications of e-governance on the service value chain before analysis. During the data analysis, each variable category was given a numerical code, which represents answers given to each question. However, the questions, which used “yes” and “no” answers were assigned numbers (1=yes and 2=no); whereas statement questions, which used a five-point Likert scale, were assigned numbers of (1-strongly agree, 2-agree, 3-disagree, 4-strongly disagree and 5-not sure) to collect data on research variables that were processed in SPSS 22. However, it is worthy to highlight that because respondents did not attribute any significance to scale “5-not sure”, the researcher had no other choice but to discard it in data presentation in order to avoid repeating null value in all tables (IS City, 2010).

5.4 RESEARCH QUESTIONS

As mentioned in section 4.10, research questions formed a basis for the survey questionnaire development and the focus group discussions. The questionnaire was divided into two sections: section one (1) demographic data and section two (2) content-based data. Objectively, section 1 questions ranged from 1 to 3. The data that was collected in section 1 was used for respondents' profiling purposes only. Section 2 questions ranged from 4 to 55. The data that was collected in this section was analysed to answer the research questions and test hypotheses.

Conclusively, the drafted questionnaire had a total of 55 questions. Focus group questions ranged from 4 to 8, which were discussed by six participants under the researcher's moderation. Furthermore, descriptive statistics, which involved correlation techniques to establish a causal relationship between research variables, were utilised. However, correlation between DTI Congo's potential online business registration system and organisation re-branding vis-à-vis internal customers (employees) could be necessary, but was not a sufficient condition to make causal inferences with reasonable confidence. To ensure such causal inferences, research hypotheses were tested, which is when the researcher opined that correlation between DTI Congo's online business registration system and effective and efficient service delivery do imply causation. The following section explains how data from the questionnaires was analysed by using correlation and causation techniques, frequency distribution, and descriptive statistics.

5.5 DESCRIPTIVE STATISTICS

Descriptive statistics refer to statistics that are used to describe relevant research data (Cherry, 2011:1). The rationale for descriptive statistics in this study thesis is to summarise the data collected in a clear and understandable manner (David, 2011). The research described single as well as associated variables. Single variables were associated with a theory-building concept and was analysed under the frequency section, whereas associated variables were associated with the theory-testing concept, which was analysed under the correlation section. However, the study surveyed 260 DTI Congo employees, asking each of them 55 questions. To avoid staggering with 14300 answers, the researcher used SPSS data analysis involving the reproduction of data from unmanageable details to manageable summaries in order

to reach meaningful conclusions (Babbie & Mouton, 2009: 459). Once collected, the researcher focused on plotting a graph of how many times each score occurs. This is well-known as frequency distribution, which is discussed in the next section.

5.6 FREQUENCY DISTRIBUTION

In this study, frequency distribution or histogram refers to the graph plotting values of the researcher's observations. Frequency distribution enabled the researcher to assess properties of the distribution scores. In an ideal world, online business registration system data for re-branding DTI Congo would be distributed symmetrically. This is known as normal distribution and is characterised by the bell-shaped curve. Such a shape implies that the majority of scores lie around the centre of distribution.

However, as respondents' views vary, there are two main ways that distribution would trend to deviate from normal: firstly lack of symmetry (also called skew) and secondly pointiness (called kurtosis) (Babbie & Mouton, 2009). In the process, the total scores were computed to give a percentage of respondents' responses. Johnson (2011:1) notes that an analysis, which uses frequency distribution of responses to closed-ended questions and statements, shows a valuable indicator of attitudinal preferences of responses on issues mentioned in the questionnaire. The next section focuses on statistical analysis based on the merit of TAM, as IS theory, which shed light on the researcher's inductive reasoning.

5.7 STATISTICAL ANALYSIS

For a sample size $N = 260$, the researcher printed 260 questionnaires, which were distributed to respondents at DTI Congo's CFBAP offices. The response rate was 61 % because some respondents living in the city of Pointe-Noire were unable to return the questionnaire at work. However, the researcher attempted to trace their homes to collect the questionnaires. Unfortunately, that was not possible owing to the lack of proper street names and house numbers in the city of Pointe-Noire. Nevertheless, participating in this study represented national pride for the majority of respondents, who wish to support more Congolese citizens conducting research at the doctoral level. Therefore, recalling from section 3.3, the first part of the statistical analysis was based on Figure 5.2: theory building concept.

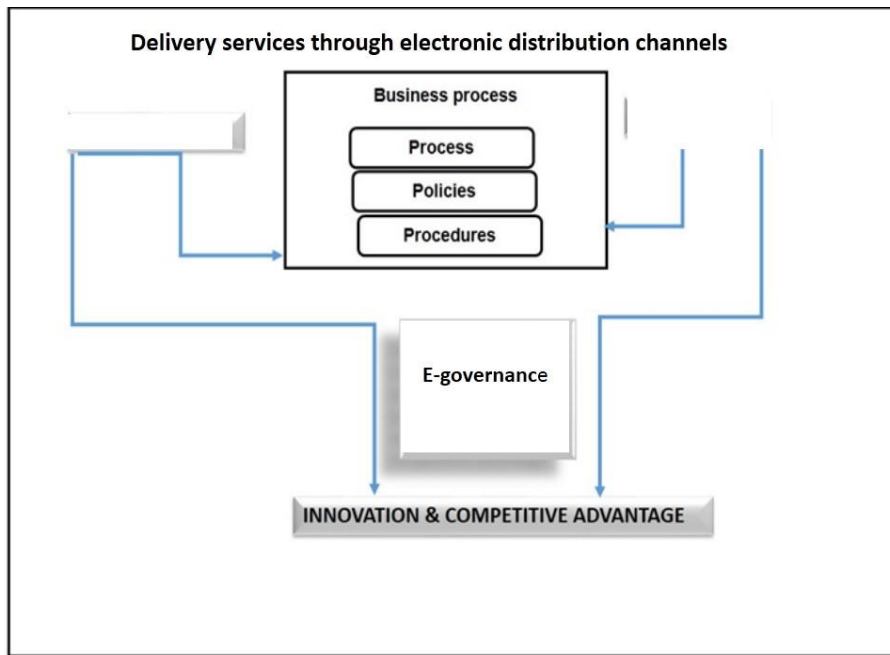


Figure 5.2: Inductive reasoning of e-governance adoption

From Figure 5.2 the researcher argues that the increased deployment of e-governance technology is modifying the crux of service encounters that formerly had a personal touch both in developed and developing economies. Hence, employees at DTI Congo harness the technological platform known as an online business registration system, which is being claimed at the CFBAP to the maximum extent to re-brand the organisation. In response to the claiming, the researcher analysed and interpreted both demographic and content-based data, which are reviewed under the research results section.

5.8 DATA ANALYSIS OF CLOSED-ENDED QUESTIONNAIRE

For purposes of the research, closed-ended questions were utilised. The rationale was to get deeper understanding of the phenomena. Closed-ended questions are also known to be more specific, thus more likely to communicate similar meanings compared to open-ended questions, which enable respondents to use their own words, making it difficult to compare meanings of the responses (Writing, 2011:1). Closed-ended questions were efficient as they took less time from respondents to answer. However, to answer the research questions, closed-ended questions related to respondents' gender and education level were analysed and discussed under the demographic data section.

5.8.1 DEMOGRAPHIC DATA

Demographic data represents characteristics of the research population, which include information such as gender, age, education level, marital status, number of dependents and work experience. For purposes of this study, only respondents' data related to gender, education level and work experience were analysed and interpreted as follows.

5.8.1.1 RESPONDENTS' GENDER REPRESENTATION

The rationale for this information was to evaluate DTI Congo employees' mindsets and online service perception by gender gap.

Table 5.4: Respondents' gender representation

	Frequency	Percent	Valid Percent	Cumulative Percent
Male	120	75.5	75.5	75.5
Valid Female	39	24.5	24.5	100.0
Total	159	100.0	100.0	

(N=159)

The results in Table 5.4 reveal that among 159 respondents, 75% were male and 25% female. This shows that male respondents were dominant in this sample. Further scrutiny in this variable leads to a conclusion that intention to adopt an online system for efficient service delivery is largely based on male employees' perceived usefulness of the system. The interpretation of this attitude is in return influenced by a belief in tandem with the theory of planned behaviour and technology acceptance.

Further scrutiny indicates that the belief has two components: belief about online business registration system adoption and belief in the self. Belief in online service system meant trusting that implementing business registration at the DTI Congo will enable efficient service delivery. Belief in the self refers to DTI Congo male employees' capacity to embrace innovation with their respective level of education.

5.8.1.2 RESPONDENTS' EDUCATION LEVEL

The rationale of this information is to correlate employees' educational level and their ability to accumulate knowledge, further ICT training when adopting online service.

Table 5.5: Respondents' level of education

	Frequency	Percent	Valid Percent	Cumulative Percent
Primary School	1	.6	.6	.6
High School	41	25.8	25.8	26.4
College	52	32.7	32.7	59.1
University	65	40.9	40.9	100.0
Total	159	100.0	100.0	

(N=159)

Table 5.5 above reflects that 0.6% of respondents have primary school as their highest education level, while 25.8% completed high school; 32.7% finished the college and 40.9% completed university. The author intended to examine the role of training that addresses the elements needed to migrate to online service.

Data interpretation leads to the argument that training not only has capacities to increase employees' creativity, spontaneity, expertise, and teamwork quality; but also creates the context that supports e-governance adoption, namely perceived ease of use and behavioural intention. Online business registration adoption would extend employees' job description with activities such as blogging, social media interaction, content networks, behavioural targeting and re-messaging to re-position the organisation as innovative in the mass level. However, considering that familiarity with the above activities would request training, organisation re-branding efforts would reflect on customised training that caters for differences among employees' educational level and interests. Hence, some employees might prefer an online training session; while others might need a handholding and support in the form of a personal coach. As it was argued that in public organisation, it is not uncommon for the offering to be a service. The Internet enables public service organisation to make

service delivery more efficient and effective. Training should also include the concept of corporate brand identity, which was defined “*as what the organisation is, what the employees do on daily basis, why they do it, and who they do it*”. Brand identity has the potential to increase organisation’s long-term sustainability, enables brand equity and employee motivation and job satisfaction.

Employees’ level of education is related to organisation’s internal marketing dynamics. Re-branding efforts should focus on improving employees’ working conditions, job satisfaction, communication, motivation, personal growth, business policies and procedures, security and supervision. Hence, major corporate re-branding attributes of online service delivery are competence, strength and sincerity enabling service employees to track customer data more easily, increase productivity in a way that reduces weekend work and over-time. More than that, business registration office represents an upstream value chain with potentials to add value in the process; thus embracing new technology, would not just enable service delivery in innovative way, but also will re-position the organisation in the mind of its internal customers (employees) as lean and innovative organisation.

The above leads to interpret that relationships exist between employees’ satisfaction, customer satisfaction and organisation competitive advantage. Satisfied customers can, in turn, reinforce employees’ sense of satisfaction in their jobs. Even in public organisation where most of the services are mandatory, unless service employees are happy in their jobs, customer satisfaction will be difficult to achieve. The service profit chain suggests that there are critical linkages among internal service quality; employee satisfaction; the value of services and competitive advantage. Employee level of education and behaviour have effect on service quality dimensions namely reliability, responsiveness, assurance, empathy and tangibles. Delivering the service promised (reliability) is often totally within the control of front-line employees. Front-line employees directly influence customer perceptions of responsiveness through their personal willingness to help and their promptness in the service process. The assurance dimension of service quality is highly dependent on employees’ ability to communicate their credibility and to inspire trust and confidence.

Employees operating within organisation boundaries should be well-trained and groomed because they provide a link between the external customer and environment, and the internal operations of the organisation. They serve a critical function in understanding, filtering and interpreting information and resources to and from the organisation and its external constituencies. Such positions are often high-stress jobs because they require extraordinary levels of emotional labour, frequently demand an ability to handle interpersonal and inter-organisational conflicts, and call on the employee to make real-time trade-offs between quality and productivity on the job. These stresses and trade-offs can result in failure to deliver in emotional labour, which widens the service performance gap.

Failure to adhere to above translate that quality service delivery can become source of conflicts. The frustration and confusion of front-line employees caused by lack of training and innovation can lead to employees' stress and job dissatisfaction and burnout. For example, receptionists at DTI Congo perceive themselves performing roles that give them a status below that of the customer (entrepreneurs). This is often described as a subordinate service role. They feel that the customer has more control over their role than they do. As a result, some receptionists at DTI Congo develop their own approach to overcome the perceived inequality between customers and themselves. The next section elaborates on respondents' work experience at DTI Congo.

5.8.1.3 RESPONDENTS' WORK EXPERIENCE AT DTI CONGO

The rationale of this information was not just to determine how long employees have been working for DTI Congo, but also to depict their experience as front-line managers in the service delivery.

Table 5.6: Respondents' work experience

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 0-2	54	34.0	34.0	34.0
3-5	4	2.5	2.5	36.5
6-11	8	5.0	5.0	41.5
12-15	30	18.9	18.9	60.4
+15	63	39.6	39.6	100.0
Total	159	100.0	100.0	

(N=159)

Table 5.6 above shows that 34% of respondents have been working for DTI Congo for less than 2 years and 2.5% have been employed between 3 and 5 years. However, 5% of respondents spent between 6 and 11 years at DTI Congo, while, 18.9% of respondents have been employed between 12 and 15 years; and finally 39.6% have more than 15 years of service at DTI Congo. DTI Congo employees experience internal communication challenges within directorates, causing delays in the service delivery. Second data analysis revealed that receiving and forwarding business permit application to the relevant department takes up to 10 days. Application process and signatures often take up 15 days, thereafter comes permits collection during business hours only.

Further interpretations highlight that under Maslow's hierarchical needs theory, salary is associated with the lower level needs, such as physical and security needs. Thus Maslow (1954) states that once the lower order needs are met, higher order needs will prioritise, thus, additional raises in salary do not motivate employees any further. Drawing from the above, and in order to improve job satisfaction and performance level of workers, managers at DTI Congo should work on the motivators by adopting new technology as workers value motivators. Arguably, salary plays an important role in motivating Congolese employees. However, the strength of the relationship between salary and job satisfaction at DTI Congo may be influenced by a mediator. The mediator may serve to clarify and explain how and why such relationships occur.

Insufficient advocacy of the mediator can lead to high rate of absenteeism, demotivation, frustration and turnover of experienced employees. The above analysis leads to interpret that poor internal communication within the organisation is a source of poor working conditions, which eventually undermines job satisfaction and demotivate front-line employees. Based on the discussion above, the next sections aimed at modelling relationships among research variables. Modelling will test the relationships between technology adoption, job satisfaction, and employee motivation, public service organisation re-branding and re-positioning, and nation-branding.

5.8.2 CONTENT-BASED ANALYSIS

Content-based analysis is a quantitative method that analyses written words, which enables a more objective evaluation of variables in the research (List, 2005:1). Under this section, online business registration value chain determinants: namely, government employees' data safety, e-governance interactive Website, transformational innovation and value chain cost reduction, e-governance, and organisation re-branding and employee empowerment were further analysed.

5.8.2.1 RESPONDENTS' OPINION: GOVERNMENT EMPLOYEE'S DATA SAFETY

The rationale for this data was to evaluate the security and safety of government employees involved in online business registration process. Hence, it was posited:

H₁: Employees' data safety is positively related to e-governance website usage, which in return is catalytic to quality service delivery.

Table 5.7: Respondents' opinion: government employee's data safety

	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly agree	116	73.0	73.0	73.0
Agree	18	11.3	11.3	84.3
Disagree	5	3.1	3.1	87.4
Strongly disagree	20	12.6	12.6	100.0
Total	159	100.0	100.0	

(N=159)

Table 5.7 reflects that 73.0% of respondents strongly agreed; and 11.3% agreed; which totals 84.3% (73.0% plus 11.3%) who believe that online business registration system adoption is possible but, that service enabling technology should be able to protect government employees' data. However, 3.1% disagreed and 12.6% strongly disagreed. Furthermore, one can believe that DTI Congo employees would trust that their e-governance website perceived is an expectation of competent and reliable online business registration.

The above data interpretation underlines that trust in technology acceptance results from a primarily cognitive evaluation of performance beliefs, which are positively related to technology acceptance model. Reliable and safe online business registration service will not be based only on the physical aesthetic setting, which signals to customers how an online business registration service would take, but also in equipping employees with necessary software and hardware to safeguard governmental data. Online business registration adoption would extend employees' job description with activities such as blogging, customer data management, social media interaction, content networks, behavioural targeting and re-messaging to re-position the organisation as innovative in the mass level.

However, considering online data safety, cyber-security systems protecting government employee's data become a mediator for e-governance adoption. Perceived usefulness will depend on the system's ability to improve employees' working conditions, communication, personal growth, business policies and procedures, Internet security and supervision, but most importantly enable employees to track customer data more easily, increase productivity in a way that reduces weekend work and over-time. The above refers to linkware, which is an integration platform would be more concerned with how dynamic and interactive the online business registration system would be. The free flow of data would play a crucial role in the successful use of that potential online business registration system. For example, without secured platform for government employee data safety, DTI Congo might become more static online than offline. Thus, the availability of Internet security measures would reinforce the accessibility of the online business registration system, therefore re-positioning the organisation by giving peace of mind to the employees involved in online business permit process.

5.8.2.2 E-GOVERNANCE ADOPTION AND NATION BRANDING

The rationale of this data was to evaluate the effect of online service adoption at DTI on the country as brand and business destination. Hence, it was formulated in:

H₃: customer's satisfaction is positively related to quality service delivery (internal customer's happiness), hence; service-enabled technology adoption in public service organisation can re-brand and re-position it vis-à-vis to internal customers.

Table 5.8: Respondents' opinion: e-governance and nation branding

	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly agree	79	49.7	49.7	49.7
Agree	51	32.1	32.1	81.8
Disagree	9	5.7	5.7	87.4
Strongly disagree	20	12.6	12.6	100.0
Total	159	100.0	100.0	

(N=159)

Table 5.8 above reflects that 49.7% of respondents strongly agreed; and 32.1% agreed; which totals 81.8% (49.7% plus 32.1%) who believe that online service adoption at DTI Congo is possible, and can re-brand the nation as business destination. However, 5.7% disagreed and 12.6% strongly disagreed, which totals 18.3% (12.6% plus 5.7%) who do not believe this. The marketing connotation of the above assertions imply that the e-governance adoption will close the gaps between Congolese economy and those of Central African nations.

Public service organisations with strong brand built familiarity between service delivery processes and employees. It can be interpreted that familiarity focuses on resource allocation in the service delivery, service standards, information access, courtesy, openness, transparency and value for money. Thus, countries which have adopted online service in public organisations, not only that they re-branded themselves as business or tourist destinations; but most importantly technology adoption enabled employees to track customer data more easily, increased productivity in a way that reduces weekend work and over-time. Behavioural intention of e-governance at DTI Congo supports the views that nations are embracing ICTs in public service to build and sustain their global competitiveness and ensure national economic development. It can be analysed as process of building nation brand equity, brand image and a sustainable and competitive country reputation. The interpretations point out that governments are tasked with the economic and political development of their

countries. National development cannot be achieved in isolation of the international community, as markets and foreign policies compete in the international arena. The complexity of these elements and a nation's political, economic, legal and cultural environment all contribute to a nation's identity and image.

DTI Congo has to adopt different strategies in order to confront specific challenges of economic diversification. More and more countries around the world are embracing e-governance in order to diversify the economy and strengthen economic performance. Countries as culturally and geographically diverse as Germany, South Korea, New Zealand, Scotland, Estonia, Britain and South Africa have judged it worthwhile to develop nation-branding based on the ICT adoption in public service.

5.8.2.3 RESPONDENTS' OPINION ABOUT ONLINE BUSINESS REGISTRATION SYSTEM AND EMPLOYEES' ROLE IN SERVICE DELIVERY

The rationale of this data was to evaluate whether online business registration system adoption at DTI Congo requests employees to play certain in service delivery, compare to the current.

Table 5.9: Respondents' opinion about online business registration system and employees' role in service delivery

	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly agree	93	58.5	58.5	58.5
Agree	35	22.0	22.0	80.5
Disagree	12	7.5	7.5	88.1
Strongly disagree	19	11.9	11.9	100.0
Total	159	100.0	100.0	

(N=159)

Table 5.9 shows that 58.5% of respondents strongly agreed; and 22.0% agreed; which totals 80.5% (58.5% plus 22.0%) who believe that online business registration system adoption at DTI Congo will require employees to play new roles. However, 7.5% disagreed and 11.9% strongly disagreed, which totals 19.4% (7.5% plus 11.9%) who do not believe this. Data analysed pointed that front-line employees are critical to the success of any organisation. The importance of employees in the marketing of services is captured in the people element of the services marketing mix namely people (the service), the organisation's eye, the brand and the marketers. It can be interpreted that satisfied customers can, in turn, reinforce employees' sense of satisfaction in their jobs. Even at DTI Congo where most of the services are mandatory, unless service employees are happy in their jobs, customer satisfaction will be difficult to achieve.

Further interpretation highlights that both service climate and human resource management can be reflected in the quality of the service delivered. The service profit chain suggests that there are critical linkages among internal service quality, employee satisfaction, motivation, the value of services and employee retention. Indeed employee behavioural intention towards e-governance have effect on service quality dimensions namely reliability, responsiveness, assurance, empathy and tangibles. Delivering the service promised (reliability) is often totally within the control of front-line employees. Front-line employees play crucial role in customer perceptions of responsiveness through their personal willingness to help and their promptness in serving customers. The assurance dimension of service quality is highly dependent on employees' ability to communicate their credibility and to inspire trust and confidence. Front-line employee's role implies paying attention, listening, adapting and being flexible in the process. Their appearance and dress code are important aspects of the tangibles dimension of quality.

Nevertheless, it is worthy to stress that DTI Congo's front-line employees experience high-stress level. In addition to mental and physical skills, it is required from them to have extraordinary levels of emotional labour. They must have ability to handle interpersonal and inter-organisational conflict, and calls on them to make real-time trade-offs between quality and productivity on the job. These stresses and trade-offs can result in failure to deliver in emotional labour, which widens the service

performance gap. Such labour includes delivering smiles, making eye contact, showing sincere interest and engaging in friendly conversations with potential customers. Friendliness, courtesy, empathy and responsiveness directed towards customers all require huge amounts of emotional labour from the front-line employees who shoulder this responsibility for the organisation.

Quality service delivery at DTI Congo can become source of conflicts because front-line employees often face interpersonal and inter-organisational conflicts on the job. Their frustration can lead to stress, job dissatisfaction, and demotivation. For example, receptionists at DTI Congo perceive themselves performing roles that give them a status below that of the customer (entrepreneurs). They feel that the customer has more control over their role than they do. As a result, some receptionists develop their own approach to overcome the perceived inequality between customers and themselves.

5.8.2.4 RESPONDENTS' OPINION ABOUT DTI CONGO'S ONLINE SERVICE AS TRANSFORMATIONAL INNOVATION

The rationale of this data was to evaluate the degree of innovation and value that will be added in the service process. Hence, it was argued in:

H₂: considering the benefits of e-governance, DTI Congo's potential online business registration system can transform service process, and add value.

Table 5.10: Respondents' opinion about DTI Congo's online service as transformational innovation

	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly agree	89	56.0	56.0	56.0
Agree	29	18.2	18.2	74.2
Disagree	22	13.8	13.8	88.1
Strongly disagree	19	11.9	11.9	100.0
Total	159	100.0	100.0	

(N=159)

Table 5.10 above indicates that 56.0% of respondents strongly agreed; 18.2% agreed; which totals 74.2% (56.0% plus 18.2%) who believe that online business registration system implementation at DTI Congo will bring innovation and add value in the service process. However, 13.8% disagreed and 11.9% strongly disagreed, which totals 25.7% (13.8% plus 11.9%) of respondents who do not believe this. In the brick-and-mortar business registration process, applicants have to follow sequentially every step from (1) receiving and forwarding applications to the appropriate directorates, (2) the relevant directorate will be concerned with inputs evaluation, which would determine whether the output is satisfactory or not; (3) outbound logistics; (4) marketing activities and (5) front office staff to help customers in collecting the outcomes. Data analysis reveals that DTI Congo employees absorb much needed resources (time) in off-line business registration, which creates the incidence of occupational crime in the service delivery.

The above leads to interpret that online business registration adoption at DTI Congo will be transformational innovation because it will transform the business registration process and add value by saving operations cost. E-governance has the potential to transform every aspect of human lives, including how citizens socialise, manage money, purchase goods and services, and interact with government departments. E-governance based-channels do not require direct human interaction however, they do require pre-designed ICT platform and Internet connection to deliver value.

5.8.2.5 RESPONDENTS' OPINION: ONLINE BUSINESS REGISTRATION AND FINANCIAL IMPLICATIONS

The rationale of this data was to evaluate employees' understanding of financial implications for online service adoption.

Table 5.11: Respondents' opinion: online business registration and financial implications

	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly agree	63	39.6	39.6	39.6
Agree	55	34.6	34.6	74.2
Disagree	19	11.9	11.9	86.2
Strongly disagree	22	13.8	13.8	100.0
Total	159	100.0	100.0	

(N=159)

Table 5.11 reflects that 39.6% of respondents strongly agreed; 34.6% agreed; which totals 74.2% (39.6% plus 34.6%) who believe that there will be financial implications for online service adoption at DTI Congo. However, 11.9% disagreed and 13.8% strongly disagreed, which totals 25.7% (13.8% plus 11.9%) of respondents who do not believe this. This shows that there potentials and provisions for DTI Congo to reach the last stage of e-governance.

Previous debate in sections 2.7.13 indicates that there is a relationship between quality service and profitability of public service organisation for improving the country's GDP. This leads to interpret that many managers in public service organisations have trusted the sense that an increase in service will lead to an increase in GDP. Perceived usefulness of e-governance indicates that improvement in service delivery has a significant and positive impact on country's financial performance and credit ratings. DTI Congo's online service prices should be cost-

based. Under this pricing strategy, DTI Congo should determine expenses from e-governance infrastructure and labour, adds percentages for overhead and profit, and thereby arrives at the price. The basic formula that can be used is:

Online business registration cost = Direct costs + Overhead costs + Profit margin

Where direct cost involves PCs, network equipment, cables, Internet connection, servers and labour that are associated with delivering the service. Overhead costs are a share of fixed costs, and the profit margin is a percentage of full costs (direct + overhead). However, challenges associated with cost-based pricing for services have impact on private organisation because of competition. Hence, DTI Congo's services are unique and mandatory to entrepreneurs, cost-based pricing would have little impact on budget.

5.8.2.6 RESPONDENTS' OPINION ABOUT ONLINE BUSINESS REGISTRATION AND ORGANISATION RE-POSITIONING

The rationale of this data was to determine whether online business registration system adoption will make DTI Congo a lean organisation. This section again is a basis to test the hypothesis:

H₃: customer's satisfaction is positively related to quality service delivery (internal customer's happiness), hence; service-enabled technology adoption in public service organisation can re-brand and re-position it vis-à-vis to internal customers.

Table 5.12: Respondents’ opinion about online business registration and organisation re-positioning

	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly agree	91	57.2	57.2	57.2
Agree	20	12.6	12.6	69.8
Disagree	13	8.2	8.2	78.0
Strongly disagree	35	22.0	22.0	100.0
Total	159	100.0	100.0	

(N=159)

Data collected in Table 5.12 indicates that 57.2% of respondents strongly agreed; 12.6% agreed, which totals 69.8% (57.2% plus 12.6%), who believe that online business registration system adoption will re-position DTI Congo as lean organisation. However, 8.2 % disagreed and 22.0% strongly disagreed, which totals 30.2% (8.2% plus 22.0%) of respondents who do not believe this.

Discussions in sections 2.3 pointed that public service organisations in general are already positioned in a certain way. That leads to interpret that successful organisation re-positioning requires to change in the way services have been being offered. Thus, online business registration adoption is one of the tools DTI Congo can use to re-position itself in the minds internal customers (employees). Figure 2.1 illustrates outcomes that would be generated by online business registration adoption for re-positioning.

The analysis suggests that designed online business registration system proposed to DTI Congo should include Stageware, Orgware, Linkware, and Customerware. Stageware includes the physical setting of the online business registration system, which would play an important role in shaping DTI Congo employees’ perception on the new system of delivering service in innovative way. Orgware refers to the service organisational management system, including the business process, policies, and the procedure in place. Orgware will play an important role in the setup of a rewards

structure that would shape employees' performance. Linkware choices would concern the responsiveness of online business registration systems in improving service delivery. Customerware would represent alternatives about where and how entrepreneurs would manoeuvre the service delivery system, either from home or within DTI Congo premises.

5.8.2.7 RESPONDENTS' OPINION ABOUT ONLINE BUSINESS REGISTRATION ADOPTION AND VALUE CHAIN COST REDUCTION

The rationale for this data was to evaluate whether online business registration system adoption will reduce service process cost (time) at DTI Congo. The above enabled to test hypothesis:

H₂: considering the benefits of e-governance, DTI Congo's potential online business registration system can transform service process, and add value.

Table 5.13: Respondents' opinion about online business registration adoption and value chain cost reduction

	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly agree	102	64.2	64.2	64.2
Agree	27	17.0	17.0	81.1
Disagree	10	6.3	6.3	87.4
Strongly disagree	20	12.6	12.6	100.0
Total	159	100.0	100.0	

(N=159)

Data in Table 5.13 indicates that 64.2% of respondents strongly agreed; and 17.0% agreed; which totals 81.2% (64.2% plus 17.0%) who believe that DTI Congo's online business registration system will reduce service value chain cost (time). However, 6.3% disagreed and 12.6% strongly disagree; which totals 18.9% (6.3% plus 12.6%) who do not believe this.

In section 2.5 pointed that competitive advantage in public service organisation cannot be achieved by looking at the organisation as a whole. Indeed DTI Congo's competitive advantage would stem from various activities they perform in the service delivery. That can be interpreted that operations requirements from business registration, service design and production, marketing, delivery represent cost position strategy. A cost advantage would derive from DTI Congo's centralised online service transactions from business registration to marketing. Such interpretation matches Figure 2.2, which illustrates the contention of value chain, competitive advantage and online business registration.

Recalling from Figure 2.2 and in line with observation results, in the first step, receiving business permit application and forwarding such application to the appropriate directorates could take 3 to 10 days. During the second step, which is operations, the relevant directorate at the registrar office is concerned with inputs evaluation, which would determine whether the output is satisfactory, or not. This assessment and manager's signature often takes 5 to 15 days. The third step of outbound logistics consists of storing granted certificates of incorporation, and collection and distribution of the outcomes; which would take 2 to 3 working days. The fourth step, which is related to the marketing activities of the registrar, would be associated with the availability of front office staff to help customers in collecting the outcomes only during business hours. When customers come to inquire for the outcomes, front office staff inform applicants whether the certificate has been granted or not. If it was denied, they friendly explain the appeal process and the way in which customers could acquire the product (business permit). The fifth and final step of primary activities in Figure 2.2 referred to service. It is the total productivity training associated with rendering of service in order to enhance and maintain the value of the service and the image of the registrar. Hence, infrastructure, human resource management, technology, and procurement are the bedrocks of support activities in the value chain.

The support activities of DTI Congo include infrastructure, human resource management, technology and procurement. Infrastructure includes DTI Congo's service processes, procedures, and policies (PPP).

The interpretations lead to confirm that human resource management supports the entire business registration value chain from recruitment, training, level of skills, employee motivation to compensation. Further, technology comprises of activities such as ICTs research and development, service design and servicing procedures that improve business registration service. Technology would embody every value activity whether it is “know-how” or an online business new system. Procurement at DTI Congo refers to the function of the registrar’s input acquisition: the purchase of stationery, computers, printers and online service technologies. The above leads to argue that effective and efficient business registration is not merely a set of independent activities, rather a collection of interdependent ones. Such interdependence are in the primary-primary level and in the primary-support level. The above meant that in the cities like Pointe-Noire, where literally the concept of physical address is not enforced, and the choice of the Internet to reduce value chain becomes imperative.

5.8.3 INTERPRETATIONS OF RESEARCH UNDERPINNING THEORY VARIABLES

Correlation is a statistical measurement of the relationship between two variables (Cherry, 2010:1). For this research, the rationale for correlation was to determine and interpret possible relationships, which exist between two or more variables (Willemse, 2009:114). Drawn hypotheses made it easier to establish statistics inferences:

H₁: Employees’ data safety is positively related to e-governance website usage, which in is catalytic to quality service delivery;

H₂: considering the benefits of e-governance, DTI Congo’s potential online business registration system can transform service process, and add value;

H₃: customer’s satisfaction is positively related to quality service delivery (internal customer’s happiness), hence; service-enabled technology adoption in public service organisation can re-brand and re-position it vis-à-vis to internal customers.

Given the above, correlations were established between DTI Congo’s potential online business registration system and transformational innovation in the value chain. Another correlation was Government employees’ data safety and e-governance interactive Website, the last correlation was DTI Congo’s potential online business registration system and organisation re-branding vis-à-vis internal customers (employees). Recently, it has been argued that the link between two variables may be coincidental rather than causal (New York Education, 2011:3). Furthermore, Cherry (2010:1-2) asserts that possible correlations range from +1 to –1 and a zero correlation indicates that there is no relationship between the research variables. However, a correlation of –1 indicates a perfect negative correlation, which means that as one variable goes up, the other goes down whereas a correlation of +1 indicates a perfect positive correlation, hence both variables move in the same direction together.

Moreover, rather than one variable causing another, two variables with a perfect correlation of +1 might be because of a third variable. Data in Table 5.14 categorise the degree of correlations between research variables.

Table 5.14: Levels of correlation coefficient (r)

Size of r	General interpretation
+ or – (0.9 to 1.0)	Very strong correlation
+ or – (0.8 to 0.9)	Strong relationship
+ or – (0.6 to 0.8)	Moderate relationship
+ or – (0.2 to 0.6)	Weak relationship
+ or – (0.0 to 0.2)	Very weak or no correlation

(Source: Willemse, 2009: 119)

5.8.3.1 CORRELATIONS ANALYSIS

The rationale for this data was to determine employee’s motivation to use online system and the capacity of the system to protect their data. Because the aim was to group correlation analysis in one table, Cronbach's coefficient was used to avoid testing relationships between unrelated variables. Table 5.15 measures internal consistency among research variables before proceeding with correlation analysis.

Table 5.15: Testing reliability with Cronbach’s coefficient

<i>E-Governance</i>	<i>Job</i>	
<i>Satisfaction factors</i>	<i>Number of Items</i>	<i>Cronbach’s alpha</i>
Internal Communication (IC)	3	0.70
Nature of Work (NW)	3	0.71
Advancement (AD)	2	0.70
Technology (T)	3	0.72
Personal Growth (PG)	3	0.71
DTI Policy (DTIP)	3	0.72
Internet Security (IS)	3	0.76
E-governance Adoption (EGA)	3	0.80
Salary (S)	2	0.84
Perceived Ease of Use (PEOU)	3	0.74
Motivation (M)	2	0.80
Training (T)	8	0.84
Re-branding (RB)	3	0.80
Re-positioning (RP)	4	0.75

(Source: Survey, 2017)

A reliability test was performed to check the consistency and accuracy of the measurement scales. Table 5.15 shows that the results of Cronbach’s coefficient alpha were satisfactory (between 0.70 and 0.84), indicating that questions in each construct are measuring a similar concept. Indeed, the reliability coefficients between 0.70-0.90 are generally found to be internally consistent. Given the above, correlation analysis was conducted and combined in Table 5.16.

Table 5.16: Correlation analysis

	IC	NW	AD	T	PG	DTIP	IS	EGA	S	T	RB	RP
IC												
NW	-.135*											
AD	.100	-.023										
T	.271**	-.079	.134									
PG	.055**	.308**	.208**	.023								
DTIP	.068	.197**	.232**	.091	.282**							
IS	.017**	.059	.344**	.022	.060	.198**						
EGA	.381**	.189**	.199**	.371**	-.086	.397**	.298**					
S	-.018	-.260*	.060	-.336*	-.094	.182*	.597**	-.079				
T	.084	.152*	.095	-.194*	.190**	.029	.355**	-.068	.209**			
RB	.383**	-.144*	.346**	.239**	.221**	.213**	.164*	.075	-.143*	.146*		
RP	.376**	-.180*	.017	.360**	-.207*	.235**	.067	.279**	.007	.161*	.320**	

*Note: *. Correlation is significant at the 0.05 level (1-tailed); ** Correlation is significant at the 0.01 level (1-tailed)*

It appeared that technology ($r = 0.271$) and personal growth ($r = 0.055$) were significantly correlated to internal communication at the 0.01 level, and only nature of work ($r = 0.135$) was significantly correlated to personal growth at the 0.05 level. As far as employee data safety concerned, Internet security ($r = 0.017$), relationship with e-governance adoption ($r = 0.381$), re-branding ($r = 0.383$), and re-positioning ($r = 376$) were significantly and positively associated with job satisfaction.

Regression analysis was conducted in Table 5.17 to predict the relationships among variables within the process of technology adoption.

Table 5.17: Regression analysis (dependent variable: Job Satisfaction)

<i>DTI employee Motivational Factors</i>	<i>B</i>	<i>std error</i>	<i>t</i>	<i>VIF</i>
IC	.063	.113	.563	1.758
NW	.241*	.100	2.416	1.543
AD	.039	.089	.440	1.637
T	.067	.088	.759	1.601
PG	.019	.091	.215	1.736
DTIP	.215*	.094	2.283	2.745
IS	-.060	.085	-.702	2.572
EGA	-.059	.060	-.984	1.754
S	-0.14	.073	-.191	1.574
PEOU	.199**	.073	2.711	1.803
RB	.262**	.091	2.888	1.555
RP	14.9			
R²	.540			
Adjusted R²	.504			

Note: *. significant at the 0.05 level (1-tailed); ** significant at the 0.01 level (1-tailed)

In order to assess whether the regression suffers multicollinearity, the variance inflation factor (VIF) was calculated in Table 5.17. As indicated in Table 5.17, all VIF values are less than 5, indicating there is no multicollinearity problem in the model. The results suggested that 54% of the variance in job satisfaction at DTI Congo could be explained by behavioural intentions of employees' e-governance PEOU. The F-ratio of 14.90 (p=0.00) indicates that the regression model of e-governance adoption that improves work conditions and motivate employees on the motivational variables assessed was statistically significant. The results also reveals that nature of work, technology, personal growth and re-positioning variables were found to be significant in the DTI Congo context. The analysis demonstrates that the most significant motivational variable of job satisfaction was the working condition, indicating that front-line employees value more on the technologies improving internal communication.

Table 5.17: Regression analysis (dependent variable: Job Satisfaction)

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RB	.262**	.091	2.888	1.555
RP	14.9			
R²	.540			
Adjusted R²	.504			

Note: *. significant at the 0.05 level (1-tailed); ** significant at the 0.01 level (1-tailed)

Given the above, subsequent discussions on correlations are elaborated in the next section.

5.8.3.2 DISCUSSING REGRESSION AND CORRELATIONS

In line with ***H1: Employees' data safety is positively related to e-governance website usage, which in is catalytic to quality service delivery***, one can argue that government employees' data safety during online business registration at the DTI Congo will be the leading indicator of behavioural intentions. Challenges of e-governance adoption in service organisation this leads to interpret that security is a concern because government departments need to protect their information and systems from breaches of computer security that threaten not only the integrity and availability of services, but also the confidence of employees and the general public in the system.

More than that, employees' related challenges in adopting e-governance include bureaucratic government organisation, IT impact and education, legal framework, lack of leadership and management and lack of leadership and management. In many cases the flow of information between governments departments and agencies is developed and operated to meet the needs of government departments and agencies but not citizens (bureaucracy). Employees without access to ICT, without ICT knowledge would not be able to participate in the e-governance hence causing the

divide (nature of work). E-governance (technology) requires legal framework that supports and recognises digital communication. Political leadership which lacks the necessary drive to bring about change in the public sector may be the biggest obstacle to development (re-positioning). Leaders who do not see e-government as priority pay little attention to ensuring that IT policies and programmes are introduced. From the above, creating awareness of the advantages of e-governance and persuading employee in service organisation to become users of the system in order to deliver the service in innovative way is a bigger challenge.

In ***H2: considering the benefits of e-governance, DTI Congo's potential online business registration system can transform service process, and add value***; one can interpret that better access to information and quality services for citizen underlines that ICT would make available timely and reliable information on various aspects of governance (transform the process). In the initial phase, information would be made available with respect to simple aspects of governance such as forms, laws, rules and procedures. As regards services, there would be an immediate impact in terms of savings in time, effort and money, resulting from online and one-point accessibility of public services backed up by automation of back end processes.

Simplicity, efficiency and accountability in the government underscores that the application of ICT to governance combined with detailed business process reengineering would lead to simplification of business registration (technology). Expanded reach of governance suggests that rapid growth of communications technology and its adoption in governance would help in bringing government departments to the doorsteps of the citizens (working conditions). Expansion of telephone network, rapid strides in mobile telephony, spread of internet and strengthening of other communications infrastructure would facilitate delivery of a large number of services provided by the government. The interpretation of this correlation leads to the argument that online business registration adoption in public service organisation is a key component of service organisation re-branding (re-positioning). Indeed, the system will be used by service provider employees to present brand offerings to target audience (improving working conditions).

In line with ***H₃: customer's satisfaction is positively related to quality service delivery (internal customer's happiness), hence; service-enabled technology adoption in public service organisation can re-brand and re-position it vis-à-vis to internal customers***, internalisation and integration of country as brand leads to the service delivery technologies being lived by government employees (personal growth). DTI Congo's IS infrastructure has the potentials to enable both managers and employees to witness corporate re-branding and re-positioning in business registration process. Corporate brand increases organisation's long-term sustainability and enables brand equity; therefore, effective brand equity would lead to employee job satisfaction (nature of work). Debates in sections 1.7.2 agreed that that brand identity efforts start with the development of a business model that takes into account the organisation's mission, vision, employees and market input.

An organisation's brand identity process would consider internal research, the development of potential branding models, validation of proposed model, timeframe period of implementation. Whether public or private organisation, building brand identity would request internal assessment of brand's present position. Private organisation competes with firms offering similar products and targeting same market niche, however, government department would compete with other departments in terms of quality service delivery. The process of building and implementing brand identity requests that organisations conduct brand identity assessment. The assessment would indicate the existing state, gaps and future desire state of the brand (re-positioning). Brand identity assessment would also determine where the brand stands in the mind of employees (internal customers). The argument in Figure 1.3 suggests that only once the existing state of brand is determined, that the organisation would make decisions about where the brand should be, and how to get there. Figure 1.3 articulates organisation's brand desired identity which translates the way the primary target audience (employees) would think, feel, and react when they are exposed to the brand. More than that, the competitiveness of a brand in public sector is positively related to the inclusion of all stakeholders who believe in the building process. At large, senior, middle and lower managers, full-time, part-time employees and contractors including volunteers should live integrated brand promise in the organisation's culture. The buy-in from all stakeholders relies on an investment in

hiring and training (personal growth); which plays a key role in the implementation of the branding identity. This task should never be neglected at DTI Congo because staff in service organisations are the ones who carry out the positioning and therefore can easily undermine even the best branding initiative.

5.8.3.3 TESTING DTI CONGO EMPLOYEES' DATA SAFETY (DTIEDS) AS MEDIATOR ON THE RELATIONSHIP BETWEEN ONLINE INTERACTIVITY (OI) AND E-GOVERNANCE ADOPTION (EGA)

From correlation and regression discussions, government employees' data safety over the Internet was one of the significant factors in motivating management team for online interactivity adoption (stage 4 of e-governance). However, data in Table 5.18 indicate that there is a need to dwell deeper into the reasons behind why managers at DTI Congo place such high importance on government data safety. In order to provide a clearer picture of the role of cyber-security (government employees' data safety over the Internet), the general test for mediation was performed to examine whether there is a mediator variable affecting the relationship between online interactivity factor and data safety.

Table 5.18: Testing DTIEDS AS MEDIATOR ON THE RELATIONSHIP BETWEEN OI AND E-GOVERNANCE MODEL

	<i>DV: DTIEDS (Mediator)</i>		<i>DV: OI</i>		<i>DV: EGA (Mediator)</i>	
	B	t	B	t	B	t
<i>DTI</i>						
<i>EDS</i>	0.510**	7.234	0.137*	2.496	0.168*	2.042
<i>EGA</i>					0.21**	2.638

Note: *. significant at the 0.05 level; ** significant at the 0.01 level)

Following Yin (2003), mediation analysis was used to assess whether data safety mediates the relationship between online interactivity and e-governance model. Results in Table 5.18 show that data safety was significantly and positively related to online interactivity (stage 4 of e-governance) ($\text{sig} < 0.01$). The results of running the regression test of e-governance adoption (predictor) on data safety (mediator) showed that online interactivity was significantly correlated with DTI Congo employees' data safety at the 0.05 level. The results also displayed that the effect of data safety (mediator) on e-governance model (criterion) was significant at the 0.05 level after controlling for online interactivity (predictor). As a result, it is reasonable to believe that government data safety may explain why DTI Congo's e-governance is still in stage 3.

5.9 ANALYSING FOCUS GROUP BY USING CONTENT ANALYSIS

Within the context of research hypotheses, the purpose of focus group discussions was to remove much of the subjectivity from summaries and to simplify the detection of trends, which answered research questions (List, 2005:1). As stated earlier, six respondents were selected and invited for focus group discussions, which paved a vista for further academic discourse.

- **Which benefits would you associate with an online business registration system adoption for DTI Congo?**

During discussions around this question, respondents mentioned various benefits that will come with an online business registration system at DTI Congo. However, respondents mentioned that the first benefit of online business will be to empower employees and that empowerment will create job satisfaction. They agreed on one point that online business registration will re-brand the country, enable DTI Congo to improve service delivery, and connect other government department such as CFBAP, the Ministry of SMEs, the Department of Labour (DoL), the Taxation Office, the High Court, the Congolese Chamber of Commerce (CCC), the National Centre of Statistics (NCS) and the Social Security Department (SSD). Such connections will be on 24/7 basis and will enable electronic payments and VAT declarations, therefore reducing operation costs, lead time and removing the incidence of occupational crime. The above view is shared with ***H₂: considering the benefits of e-governance, DTI Congo's potential online business registration system can transform service***

process, and add value.

- **How does online business registration system re-brand DTI Congo vis-à-vis its internal customers (employees)?**

During the focus group discussion, all six participants agreed that that online business registration adoption at DTI Congo would be a key component of service organisation re-branding. Indeed, the system is used by service provider employees to present brand offerings to target audience (Business Balls, 2017). Arguably, online service delivery system would embed guest blogging, social media interaction, content networks, behavioural targeting and re-messaging to re-position the organisation as innovative. The above outcome is positively related to ***H₃: customer's satisfaction is positively related to quality service delivery (internal customer's happiness), hence; service-enabled technology adoption in public service organisation can re-brand and re-position it vis-à-vis to internal customers.***

However, the aim of this question was to ascertain respondents' understanding of the anticipated transformation from the current procedure. Respondents argued that in the brick-and-mortar business registration process, applicants have to follow every step from (1) receiving and forwarding application, (2) relevant directorate will be concerned with inputs evaluation, which would determine whether the output is satisfactory, or not, (3) outbound logistics, (4) marketing activities and (5) front office staff to help customers in collecting the outcomes. Participants agreed that all the above-mentioned steps would be automated and integrated in an online business system. Further, they also agreed that online business registration would enable DTI Congo to achieve a conservative-relational competitive advantage, through the offering of a new product that delivers a superior customer-specific solution, which will be electronic submission of the application. Discussing the safety and security of Congolese online applicant became imperative.

- **Which challenges do you associate with online business registration adoption?**

During discussions around this question, participants expressed different approaches about the growing concerns of online government employees' data safety. Three

participants agreed that DTI Congo's online business system will be interactive and equipped with secured user controlled online applications that will expand experience, employees' knowledge. The other three respondents were very much concerned about the vulnerability and lack of integrated coordination of DTI Congo's computer systems. They suggested that security features must include confidentiality, access control, integrity, checks, identification, digital signature, data encryption and secure delivery of the online business permit. However, all the six participants agreed that computer systems will be equipped with antivirus software to contain safety threat.

- **How does DTI Congo's online service website affect service process value chain?**

The aim of this question was to view the potential transformations of product process and value chain in the employees' perspective. During discussions, all six participants agreed that the transformation of service process at DTI Congo by its potential online business registration system will be to the transformation of the actual value chain. However, one participant enforced that an online business registration system will eventually integrate both primary and support activities in the value chain. Value chain members handle physical business permit applications from one directorate the other. The major transformation will include the replacement of physical handling by electronic process of business permit applications. It was to the interest of participants to mention that because an online business registration system will integrate all value chain members' activities; therefore, chain members will like the convenience of logging onto the system and inputting the data once, rather than at every stage of the business process, which is discussed next.

- **What are the service processes, procedures, and policies of business registration?**

The purpose of this question was to create a platform where participants will exchange their experience about the current product process at DTI Congo. During the discussions, participants clarified that DTI Congo created CFBAP, which is a directorate sub-divided in three sections: namely, a new business registration section, a business status modification section and a business de-registration section.

Conclusively, new applicants always walk into the new business registration section to submit their applications. However, three participants expressed their concerns about excessive papers that applicants must submit. They argued that it would be too soon for non-registered business to submit documents such as business premises lease agreement, 3 years minimum provisional operating bank account details, and applicant's police clearances. Participants shared the same favourable opinion, which stated that the police request that the person has lived in the country for the minimum of 6 months before applying for police clearance, therefore making the process difficult to Congolese immigrant entrepreneurs who return back home to start a business. Furthermore, another participant argued that obviously the business will have to open bank account for operation purposes; thus it seems to be too early for DTI Congo to require provisional 3-year bank account, yet most of the banks will not let non-registered business open bank account.

Another participant was much concerned with the plethora of business registration numbers, which are source of confusion and corruption allegations. He stated that on registration, the CFBAP collects the fees on behalf of DTI Congo and issues a merchant's card, a business registration statement number, a business accounting number, a commerce registry number, and a real estate credit number. All participants agreed online business registration will issue an electronic unique number that all businesses will reproduce when dealing with all stakeholders. Finally, all participants reported that this discussion and entire research background have improved their understanding of Information Systems improvisation.

5.10 RESULTS OF OBSERVATION

Arguably, during observation sessions at DTI Congo of Brazzaville and Pointe-Noire, the researcher observed behaviours systematically recording the results of those observations. Every Monday and Thursday, DTI Congo receives new business permit applicants in the premises. Some of them are from Congo and others are foreigners either speaking French or English. Observing applicants enabled the researcher to overcome one of the key disadvantages of focus group and questionnaires, which is inaccuracy. Those inaccuracies include lack of awareness of own behaviour and memory. However, it was ensured that observation of applicants and employees' behaviour would not affect the behaviour the researcher. The researcher used paper-

based observation. The rationale was that owing to political tensions, security services are sensitive to any video recording in public offices in Congo-Brazzaville. In two weeks, there were 24 walks-in and eighteen of them collected forms for new business registration purposes. The rest showed little interest for applying because they wanted to operate in agriculture and marine sectors, which unfortunately DTI Congo does not disclose fees to the prospects.

Table 5.19: Summary of observation results

Walks-in	Monday	Thursday	Gender
Applicant 1	x		Male
Applicant 2	x		Male
Applicant 3	x		Female
Applicant 4	x		Male
Applicant 5		x	Female
Applicant 6		x	Male
Applicant 7	x		Male
Applicant 8	x		Male
Applicant 9	x		Female
Applicant 10	x		Male
Applicant 11	x	x	Male
Applicant 12		x	Male
Applicant 13		x	Female
Applicant 14		x	Female
Applicant 15		x	Female
Applicant 16		x	Female
Applicant 17		x	Female
Applicant 18	x		Male
Applicant 19	x		Male
Applicant 20	x		Male
Applicant 21	x		Male
Applicant 22		x	Male
Applicant 23		x	Male
Applicant 24		x	Male

(Source: Survey, 2016)

5.11 TRIANGULATION RESULTS: GAPS IN DISCUSSED MODELS

DTI Congo case study was purposefully selected case. The rationale is that it is information-rich, critical, revelatory and unique. Given the above, there is an interest in generalising the findings. Arguably, findings generalisation from DTI Congo case study was not statistical, rather analytical and based on the reasoning principles: deduction and induction. As mentioned earlier research hypotheses were:

H₁: Employees' data safety is positively related to e-governance website usage, which in is catalytic to quality service delivery;

H₂: considering the benefits of e-governance, DTI Congo's potential online business registration system can transform service process, and add value;

H₃: customer's satisfaction is positively related to quality service delivery (internal customer's happiness), hence; service-enabled technology adoption in public service organisation can re-brand and re-position it vis-à-vis to internal customers.

From the above, deductive generalisation was used. That meant building on research questions and objectives which were formulated, and testable consequences were derived by deduction. In this study, the findings were compared from the underpinning theory, case study perspectives and the empirical facts. In so doing, it was possible to verify that online service adoption at the DTI is possible. Further, the study used induction data generalisation. Given the case study and research hypotheses, this was done through inductive theory-generation, or conceptualisation, which was based on data from within a case study: DTI Congo. The Theory of Planned Behaviour (TPB) suggests that consumers' behaviour can be explained by behavioural intention, which is influenced by attitude, subjective norms, and perceived behavioural control. It was argued in Figure 1.1 that entrepreneurs have scanner, printer, cell phone, smart phone, laptop, PC and tablets represent communication tools readily available in the hands of entrepreneurs. Thus, customer-focus service organisations capitalise on these tools through Mobile Process Improvement (MPI) in the way they engage with service users.

Currently, private and public organisations implement online service delivery technologies under MPI programme for re-branding and re-positioning in order to increase job satisfaction. The model informs the conceptual framework that large organisations with departments scattered nationwide and remote employees often lack efficiency and accountability when engaging with stakeholders. For example, mobile positions in government department such as sales agents, inspectors, consultants or contractors might report late or deliver poor customer service without being held accountable.

Furthermore, the model indicates that the MPI application has the potential to inform head of directorate where employees are at any given time of day, and whether or not their customer service performance is below or above organisation's nationwide averages. Current growing concern of climate change and global warming request private and public organisations to observe environmentally friendly practices; and support green value chain initiatives. MPI implementation has the potential to replace paperwork in business process by paperless administration. For example, replacing traditional business registration service by online one, in government department would reflect a true commitment to sustainability in a way far more impactful than recycling papers in the bin (Kluwer, 2016).

TAM and TTF model focus much on the B2C e-governance interactions and created an opportunity for public service organisations to reach out to citizens in a direct way, however, the models fall short of expanding from service branding to nation branding through information Systems resources. TTF model suggests that the adoption of online business registration improvisation would be effective only if it fits the requirements of business registration. In the case of DTI Congo, it would be true only if the government department of trade and industry allocates much needed resources based on political-will.

5.12 SUMMARY

This chapter analysed and interpreted data that was collected at DTI Congo Congo-Brazzaville. In line with the research questions, hypotheses, SPSS 22 was used to process data. The summary of research key findings includes results from observation, focus group discussions, statistics analysis of research variables, Cronbach's coefficient, correlation, regression and mediator factors analysis.

In two weeks of observation at DTI Congo, there were 24 walks-in and eighteen of them collected forms for new business registration purposes. The rest showed little interest for applying because they wanted to operate in agricultural and marine sectors, which unfortunately DTI Congo does not disclose fees to the prospects. Focus group participants agreed that an online business registration system will transform the business process at DTI Congo. However, some participants diverted from the rest and were very much concerned about government data safety over the Internet and lack of integrated coordination of DTI Congo's computer systems.

The results in Table 5.4 reveal that among 159 respondents, 75% were male and 25% female. This shows that male respondents were dominant in this sample. Further scrutiny in this variable leads to a conclusion that intention to adopt an online system for efficient service delivery is largely based on male employees' perceived usefulness of the system. Table 5.7 reflects that 73.0 % of respondents strongly agreed; and 11.3% agreed; which totals 84.3% (73.0% plus 11.3%) who believe that online business registration system adoption is possible but, that service enabling technology should be able to protect government employees' data. The above data interpretation underlines that trust in technology acceptance results from a primarily cognitive evaluation of performance and beliefs, which are positively related to H_1 statements.

Table 5.8 above reflects that 49.7% of respondents strongly agreed; and 32.1% agreed; which totals 81.8% (49.7% plus 32.1%) who believe that online service adoption at DTI Congo is possible, and can re-brand the nation as business destination. Indeed, public service organisations with strong brand built familiarity between service delivery processes and employees. It can be interpreted that familiarity focuses on resource allocation in the service delivery, service standards, information access, courtesy, openness, transparency and value for money. Thus,

countries which have adopted online service in public organisations, not only that they re-branded themselves as business or tourist destinations; but most importantly technology adoption enabled employees to track customer data more easily, increased productivity in a way that reduces weekend work and over-time. Behavioural intention of e-governance at DTI Congo supports the views expressed in **H₃**.

Table 5.9 shows that 58.5% of respondents strongly agreed; and 22.0% agreed; which totals 80.5% (58.5% plus 22.0%) who believe that online business registration system adoption at DTI Congo will require employees to play new roles. Data analysis pointed that front-line employees are critical to the success of any organisation. The importance of employees in the marketing of services is captured in the people element of the services marketing mix namely people (the service), the organisation's eye, the brand and the marketers. It can be interpreted that satisfied customers can, in turn, reinforce employees' sense of satisfaction in their jobs.

Even at DTI Congo where most of the services are mandatory, unless service employees are happy in their jobs, customer satisfaction will be difficult to achieve. Table 5.10 above indicates that 56.0% of respondents strongly agreed; 18.2% agreed; which totals 74.2% (56.0% plus 18.2%) who believe that online business registration system implementation at DTI Congo will bring innovation and add value in the service process. In the brick-and-mortar business registration process, applicants have to follow sequentially every step from (1) receiving and forwarding applications to the appropriate directorates, (2) the relevant directorate will be concerned with inputs evaluation, which would determine whether the output is satisfactory or not; (3) outbound logistics; (4) marketing activities and (5) front office staff to help customers in collecting the outcomes. Data analysis reveals that DTI Congo employees absorb much needed resources (time) in off-line business registration and supports the views expressed in **H₂**.

Table 5.11 reflects that 39.6% of respondents strongly agreed; 34.6% agreed; which totals 74.2% (39.6% plus 34.6%) who believe that there will be financial implications for online service adoption at DTI Congo. Perceived usefulness of e-governance indicates that improvement in service delivery has a significant and positive impact on country's financial performance and credit ratings. DTI Congo's online service prices

should be cost-based. Under this pricing strategy, DTI Congo should determine expenses from e-governance infrastructure and labour, adds percentages for overhead and profit, and thereby arrives at the price. Data collected in Table 5.12 indicates that 57.2% of respondents strongly agreed; 12.6% agreed, which totals 69.8% (57.2% plus 12.6%), who believe that online business registration system adoption will re-position DTI Congo as lean organisation. In line with statements in **H₃**, one can interpret that successful organisation re-positioning requires to change in the way services have been being offered. Thus, online business registration adoption is one of the tools DTI Congo can use to re-position itself in the minds internal customers (employees).

Data in Table 5.13 indicates that 64.2% of respondents strongly agreed; and 17.0% agreed; which totals 81.2% (64.2% plus 17.0%) who believe that DTI Congo's online business registration system will reduce service value chain cost. That can be interpreted that operations requirements from business registration, service design and production, marketing, delivery represent cost position strategy. A cost advantage would derive from DTI Congo's centralised online service transactions from business registration to marketing, hence share views expressed in **H₂**.

Because the aim was to group correlation analysis in one table, Cronbach's coefficient was used to avoid testing relationships between unrelated variables. Table 5.15 measures internal consistency among research variables before proceeding with correlation analysis. After test, Table 5.15 shows that the results of Cronbach's coefficient alpha were satisfactory (between 0.70 and 0.84), indicating that questions in each construct are measuring a similar concept. The reliability coefficients between 0.70-0.90 are generally found to be internally consistent. Given the above, correlation analysis was conducted and combined in Table 5.16. It appeared that technology ($r = 0.271$) and personal growth ($r = 0.055$) were significantly correlated to internal communication at the 0.01 level, and only nature of work ($r = 0.135$) was significantly correlated to personal growth at the 0.05 level. As far as employee data safety concerned, Internet security ($r = 0.017$), e-governance adoption ($r = 0.381$), re-branding ($r = 0.383$), and re-positioning ($r = 0.376$) were significantly and positively associated with job satisfaction.

Regression analysis was conducted in Table 5.17 to predict the relationships among variables within the process of technology adoption. In order to assess whether the regression suffers multicollinearity, the variance inflation factor (VIF) was calculated in Table 5.17. As indicated in Table 5.17, all VIF values are less than 5, indicating there is no multicollinearity problem in the model. The results suggested that 54 % of the variance in job satisfaction at DTI Congo could be explained by behavioural intentions of employees' e-governance PEOU. The F-ratio of 14.90 ($p=0.00$) indicates that the regression model of e-governance adoption that improves working conditions and motivate employees on the motivational variables assessed was statistically significant. The results also reveals that nature of work, technology, personal growth and re-positioning variables were found to be significant in the DTI Congo context. The analysis demonstrates that the most significant motivational variable of job satisfaction was the working condition, indicating that front-line employees value more on the technologies improving internal communication.

From correlation and regression discussions, government employees' data safety over the Internet was one of the significant factors in motivating management team for online interactivity adoption (stage 4 of e-governance). However, data in Table 5.18 indicate that there is a need to dwell deeper into the reasons behind why managers at DTI Congo place such high importance on government data safety. In order to provide a clearer picture of the role of cyber-security (government employees' data safety over the Internet), the general test for mediation was performed to examine whether there is a mediator variable affecting the relationship between online interactivity factor and data safety. Results in Table 5.18 show that data safety was significantly and positively related to online interactivity (stage 4 of e-governance) ($\text{sig}<0.01$). The results of running the regression test of e-governance adoption (predictor) on data safety (mediator) showed that online interactivity was significantly correlated with DTI Congo employees' data safety at the 0.05 level. The results also displayed that the effect of data safety (mediator) on e-governance model (criterion) was significant at the 0.05 level after controlling for online interactivity (predictor). As a result, it is reasonable to believe that government data safety may explain why DTI Congo's e-governance is still in stage 3. Based on the above key findings, focus shifts to the final chapter, entitled **Conclusion and recommendations**; where the new and holistic and marketing model of online business registration for branding DTI Congo is discussed.

CHAPTER SIX CONCLUSION AND RECOMMENDATION

6.1 INTRODUCTION

Chapter Five presented data analysis and interpretation of the research findings, as well as discussions of the results in line with research hypotheses. One of the major findings is that the effect of data safety (mediator) on e-governance model (criterion) was significant at the 0.05 level after controlling for online interactivity (predictor). As a result, it is thus reasonable to believe that government data safety may explain why DTI Congo's e-governance is still in stage 3.

This chapter discusses the adoption of an online business registration model at DTI Congo (e-governance stage 4) for effective and efficient service delivery. The adoption of the online business registration model is derived from the findings of the qualitative and quantitative survey, which was used in this study. The objective of the normative model of online business registration in this study is to increase the ease of doing business in Congo-Brazzaville and improve working conditions.

The current implementation of an online business registration model is not new because many countries including the USA, EU State members, and South Africa have successfully established an online business registration service. However, the applicability of an online business registration model in Congo-Brazzaville will be unique and different owing to the country's particularities: challenge of government employee's data safety. It is arguable that a normative model inspired Backus's model was used in this study because it was found that Backus's e-governance model fits better study concepts, and the model inspired DTI South Africa's online interactivity service and the city of Johannesburg's secure e-governance portal which was launched in 2005.

The applicability of the online business registration could be an innovative resource that can be used by DTI Congo to increase ease of doing business ratings, employees' motivation, which would improve working conditions and job satisfaction, and re-brand the nation (Lukamba-Muhiya, 2008:209).

6.2 NORMATIVE MODEL OF ONLINE BUSINESS REGISTRATION FOR DTI CONGO

Currently, to register a new business at DTI Congo, entrepreneurs use word-of-mouth, calculators, spreadsheets and yellow page as Decision Support Systems (DSS). The lack of online business registration creates dysfunctions in internal communication, which frustrates and demotivates front-line employees.

Regression analysis results indicate that 54 % of the variance in job satisfaction at DTI Congo could be explained by behavioural intentions of employees' e-governance PEOU. The F-ratio of 14.90 ($p=0.00$) indicated that the regression model of e-governance adoption that improves working conditions at DTI Congo and motivate employees was statistically significant. The results also reveals that nature of work, technology, personal growth and re-positioning variables were found to be significant. The general test for mediation results show that data safety was significantly and positively related to online interactivity (stage 4 of e-governance) ($\text{sig}<0.01$). Because Backus's e-governance model has proven to provide data safety, and in line with the above findings, the study suggests this online business registration model, which is illustrated in Figure 6.1, for DTI Congo.

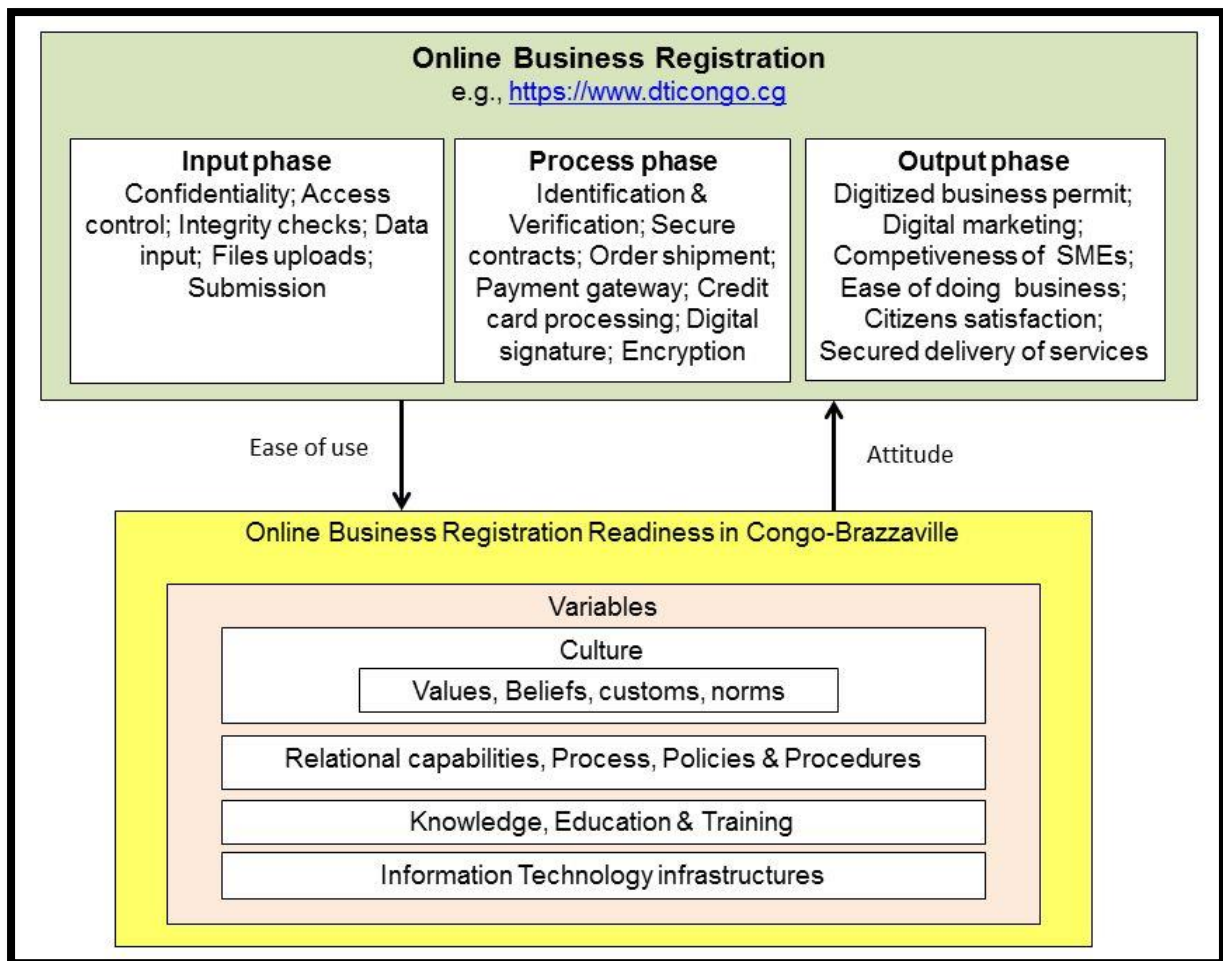


Figure 6.1: Proposed online business registration model for branding DTI Congo

This normative model is a hybrid model inspired from Backus’s model grounded on **TAM and TTF**. In line with the research’s main objective, which is the proposition of a normative model of online business registration for DTI Congo-Brazzaville, various factors contributed to the selection of the above model. Firstly, TAM is an established and extensively tested theory, which is often used to explain consumer behaviour and information technology adoption. Secondly, the rationale of choosing the TAM as inspirational model was to determine the merits of the workplace technology adoption in the service marketing and its implications on employee motivation and job satisfaction. Thirdly, considering that DTI Congo employees’ data safety is one of the assets for online interactivity (e-governance stage 4), TTF model was regarded as a source of inspiration because it has been applied successfully to predicting group decision support system acceptance in the organisations.

However, Hanekom, Rowland and Bain (1986:33) argue that any normative model suggested is often followed by concentration or deviation. The current model being suggested has also advantages and disadvantages. An advantage is that in all situations an overall picture was acquired, before being suggested. It also considers the stages of e-governance adoption for quality service delivery and nation branding.

However, a disadvantage of this normative model could be an over estimation of online business registration success. This normative model is presented based on online business registration readiness at DTI Congo, which is currently at the 3rd stage. Online business registration readiness refers to DTI Congo's propensity to embrace and use new technologies and enable employees' satisfaction (Chih Chen & Han Li, 2010).

Online business registration readiness requires working relationships between DTI Congo employees' attitudes towards the technology and their intentions to use it. On the other hand, the technology itself should be useful and easy to use. Attitudes refer to DTI Congo employees' positive or negative feelings about online business registration adoption, which in turn shapes e-governance behavioural intention. However, attitudes, intentions, usefulness, and ease of use should be related to different variables representing market dynamics.

Culture as a variable includes Congolese **values, norms, customs, and beliefs** towards e-governance. Various authors elaborated on the relationships between culture and e-governance adoption in public organisations. Employees' e-governance adoption is related to Website security and privacy, which in return depends on culture and the level of education (73.6 % of college and university graduates in Table 5.5). Javalgi (2004:563) states that recently, researchers have attempted to examine Internet adoption by using Hofstede's five cultural dimensions, which include individualism, power distance, uncertainty avoidance, masculinity, and long-term orientation. Congolese employees' attitudes towards e-governance fit into some of Hofstede's five cultural dimensions of the Internet. Female employees believe that Internet technology belongs to men, while some of their fellow men state that conducting online business registration might create a feeling of uncertainty.

Another variable that has been considered in this normative model is **dynamic service capabilities**, which is borrowed from the RBV model. Considering that the RBV model is primarily a static theory which does not address how DTI Congo would integrate resources and capabilities to drive online business registration adoption, the model links dynamic service capabilities with online security and safety of employees.

The rationale of the linkage is that since service organisations such as DTI Congo operate in a constant changing business environment, it would arguably be better to go beyond the RBV model and explain the link between innovation adoption and employee motivation (resource). DTI Congo's **dynamic capabilities** will include its **ability to integrate, build, and reconfigure Internet security measures**, which would reinforce confidence among employees. Such achievement would underline that the firm has addressed internal competencies and re-positioned its resources beyond the base set of valuables, rare, inimitable, and non-substitutable that the RBV model focuses on.

Moreover, DTI Congo's ability to coordinate internal competencies underlines cooperation and interdependence of vertical and horizontal directorates. Data exchange between new business registration section, business modification section and business de-registration section will be enforced in this normative model. Thus, the relationships between stakeholders, namely the DTI Congo, the Ministry of SMEs, the CFBAP, the DoL, the taxation office, the high court, the NCS, the SSD, the trade unions and the IMF will be improved (Lee, Kang, & Kim, 2007).

Relational capabilities are a variable associated with **product process, policies, and procedures** at DTI Congo. DTI Congo's conservative relational competitive advantage would depend on its ability to adopt service-enabled technologies and reduce value chain costs.

Information technology infrastructures, knowledge, education and skills can be combined to generate dynamic integrative capability for DTI Congo. Mengue and Auh (2006) define integration as dynamic capability that firm level resources possess and are embedded in social interactions, firm-level system, and routines. Dynamic capability is an integrative capability comprising of all assets needed to adopt e-

governance. The former includes expertise, attitudes, training; the latter includes computer systems, trust, and creativity. The above blended form of resources and capabilities is positively related to transforming the entire business registration process in Congo-Brazzaville, because resource integration creates value. It is believed that under dynamic integrative capabilities, DTI Congo might progressively offer the combination of services such as online tax payment and employee's online training (Michel, Brown & Gallan, 2008).

Online business registration behaviour is the innovative service that would be offered at <https://www.dticongo.cg>. It was argue that service innovation has two essential elements, namely enhanced technological characteristics, and extended competency. At DTI Congo, enhanced technological characteristics include tangible and intangible technical skills that will be used to deliver the service. These characteristics will be embodied in service-enabled technologies, knowledge, experience, and values inside and outside the organisation. Extended competencies refer to unique value-creating systems and DTI Congo employees' to deliver quality service online. The <https://www.dticongo.cg>, which is DTI Congo's potential secure e-governance Website, will cross the organisation's traditional boundaries and offer quality performance of innovative service.

The input phase in this normative model represented the summary variables (confidentiality, access control, integrity, checks, data input and submission), which represented online business registration steps. Therefore, the concept of input served as a powerful tool; since the elements included all the steps that users should follow in the systems to electronically register the business. However, the most important step would be to log on to the <https://www.dticongo.cg>.

Thereafter, the user would register as customer in the Website with their private e-mail address, from which the system would prompt them to click the link to activate their registration with the <https://www.dticongo.cg>. Once back again in the <https://www.dticongo.cg>, customers would log in with their activated credentials, namely user name and password. At this stage, online business registration starts by selecting new company option, where the newly to be registered business data will be

typed in. After the data input stage, customers should be allowed to view, edit and save the data before electronic payment and submission to the DTI Congo.

The process phase includes identification and credit checks of the customers applying for company registration. At this stage, payment will be processed, during which secure verifications between DTI Congo's bank, credit card issuing organisation and customer's bank will exchange confirmatory data. During data exchange, encryption and digital signature will play crucial role for customer's data safety. Once confirmatory data match, order shipment will initialise to enable electronic product shipment to customer. **The output phase** will deliver to the applicant and stakeholders much needed document and other information. The outcomes will include an online business permit delivery to the customer's private e-mail address and cellular phone notification about the outcomes.

However, in the context of this normative model, constant **feedback** will be important because relational capability is intangible; e-governance technologies are constantly changing, therefore acquiring knowledge and information from external sources about the model becomes critical. Through dynamic interactions with customers and stakeholders, DTI Congo will be responsive to both evolutionary and revolutionary technologies in the market. However, the next sections elaborate on research key findings, discussions, conclusions and recommendations.

6.3 GENERAL CONCLUSIONS AND RECOMMENDATIONS

The previous chapters and sections of this chapter presented the possible application of online service at DTI Congo for a normative model of online business registration. This last section of the current chapter features a discussion of understanding gained that corresponds to the analysis findings with the literature of the theoretical foundations. It summarises research key findings, further discussions of key findings, generates the conclusions of the first five research objectives, and makes recommendations with regard to the research main objective; which was the identification of factors needed to propose a normative model of online business registration. In reaching these conclusions and recommendations, this section demonstrates the applicability of the underpinning theory at DTI Congo, which is research contribution to the theory, denotes connections with the framework, and creates opportunities for further research.

6.3.1 SUMMARY OF KEY RESEARCH FINDINGS

6.3.1.1 DTI Congo can engage the CFBAP to adopt online business registration and increase job satisfaction and employees motivation

It was revealed that DTI Congo by the decree n° 95-183 of 18 October, 1995; delegates the tasks of business registration to the CFBAP; and oversees the promotion of e-governance, which is still in the 3rd stage. Yet, the CFBAP is the only Congolese governmental agency appointed by the DTI Congo to deal with business registration, which currently is happening in the brick-and-mortar process (lack of 4th stage: e-governance interactions). The above argument is supported by correlation analysis and regression test results. Correlation analysis reveals that technology ($r = 0.271$) and personal growth ($r = 0.055$) were significantly correlated to internal communication at the 0.01 level, and only nature of work ($r = 0.135$) was significantly correlated to personal growth at the 0.05 level. Internet security ($r = 0.017$), e-governance adoption ($r = 0.381$), re-branding ($r = 0.383$), and re-positioning ($r = 0.376$) were significantly and positively associated with job satisfaction.

Regression analysis results indicate that 54 % of the variance in job satisfaction at DTI Congo could be explained by behavioural intentions of employees' e-governance PEOU. The F-ratio of 14.90 ($p=0.00$) indicated that the regression model of e-governance adoption that improves working conditions at DTI Congo and motivate employees on the motivational variables assessed was statistically significant. The results also reveals that nature of work, technology, personal growth and re-positioning variables were found to be significant. The general test for mediation results show that data safety was significantly and positively related to online interactivity (stage 4 of e-governance) ($\text{sig}<0.01$). Hence, it was argued that even at DTI Congo where the services are mandatory, unless service employees are happy in their jobs, customer satisfaction will be difficult to achieve. In line with hypothesis:

H₃: customer's satisfaction is positively related to quality service delivery (internal customer's happiness), hence; service-enabled technology adoption in public service organisation can re-brand and re-position it vis-à-vis to internal customers; the research's main objective was therefore attained as the above evidence suggests that stage 4 of e-governance adoption is possible at DTI Congo.

6.3.1.2 DTI Congo's e-governance website can be based on Backus' model

Regression analysis conducted in Table 5.17 predicted the relationships between DTI Congo's e-governance website and employees' data safety. Hence the F-ratio was 14.90 ($p=0.00$) and indicates that not only Backus's e-governance definition fits better study concepts, but because the model inspired DTI South Africa's online interactivity service and the city of Johannesburg's secure e-governance portal, it can thus be applicable in the case of DTI Congo. The above key finding answers research main question: "how does the DTI Congo-Brazzaville intend to improve business registration using online business registration service as a branding tool"? Furthermore, the above statement share the views expressed in research hypothesis:

H₁: Employees' data safety is positively related to e-governance website usage, which in return is catalytic to quality service delivery;

6.3.1.3 Towards the creation of the Congolese Business Intelligence Centre (CBIC)

During observation sessions, there were 24 walks-in and eighteen of them collected forms for new business registration purposes. The rest showed little interest for applying because they wanted to operate in agricultural and marine sectors, which unfortunately employees did not know the procedures because DTI Congo does not disclose fees to the prospects willing to invest in the marine and agriculture sectors. The lack of knowledge in the above areas creates an institutional market knowledge vacuum, thus the necessity to create the Congolese Business Intelligence Centre (CBIC) unit within the DTI. The rationale is to build network, combine with the shortage of skills and lack of economic diversification and trigger the rise of Knowledge Management in Congo-Brazzaville. The above highlights that research secondary objective: determination of DTI Congo's readiness for product process improvisation; was attained.

One can share the view of Drucker (1993) stating that organisations will be more competitive as a result of their knowledge, rather than as a result of their physical assets. It can be argued that basic premise of knowledge management at DTI Congo will be to draw on the entrepreneurial skills and business practices used in different countries to create winning strategies based on DTI Congo employee's knowledge for

business landscape. According to Groenewald (2008), the foundation of knowledge management is that all the factors that lead to job satisfaction are improved when better knowledge is made available and used competently, through the efforts of knowledge workers. It is argued that an organisation that uses knowledge can turn that knowledge into an important source of strategic competitive advantage by generating greater value through the use of its intellectual capital. Furthermore, managing of intellectual capital will lead DTI Congo to the knowledge-based view of the assets, which consider knowledge to be the most strategically significant resource. Transformed into a learning organisation DTI Congo can increase knowledge by learning through experience, sharing of knowledge, and communities of practice (Groenewald, 2008).

6.3.1.4 DTI Congo's online service as transformational innovation

Focus group participants agreed that an online business registration system will transform the business process at DTI Congo. It was also demonstrated in Table 5.10 that 56.0% of respondents strongly agreed; 18.2% agreed; which totals 74.2% (56.0% plus 18.2%) who believe that online business registration system implementation at DTI Congo will bring innovation and add value in the service process. This innovation will transform the current the brick-and-mortar business registration process, which creates incidence current occupational crime because DTI Congo employees absorb much needed resources (time) in off-line business registration. This key finding reveals that research secondary: determining how online business registration platform can become transformational innovation tool for DTI Congo; was met, and shares the views expressed in research hypothesis:

H₂: considering the benefits of e-governance, DTI Congo's potential online business registration system can transform service process, and add value;

6.3.1.5 Transformation of the CFBAP into a lean organisation

Table 5.10 indicates that 56.0% of respondents strongly agreed; 18.2% agreed; which totals 74.2% (56.0% plus 18.2%) who believe that online business registration system implementation at DTI Congo will bring innovation and add value in the service process. Thus, not only online business registration, will re-branded CFBAP as lean entity; but most importantly that technology will enable employees to track customer

data more easily, increase productivity in a way that reduces weekend work and over-time.

6.3.1.6 Online business registration adoption will reduce value chain cost

Data in Table 5.13 indicates that 64.2% of respondents strongly agreed; and 17.0% agreed; which totals 81.2% (64.2% plus 17.0%) who support the views expressed in ***H₂: considering the benefits of e-governance, DTI Congo's potential online business registration system can transform service process, and add value;*** and believe that DTI Congo's online business registration system will reduce service value chain cost. It was agreed that competitive advantage in public service organisation would stem from various activities they perform in the process. The above underlines that research secondary objective: determining how online business registration platform would affect DTI Congo's value chain; was attained.

6.3.1.7 Online business registration and financial implications

Table 5.11 reflects that 39.6% of respondents strongly agreed; 34.6% agreed; which totals 74.2% (39.6% plus 34.6%) who believe that there will be financial implications for online service adoption at DTI Congo. Perceived usefulness of e-governance indicates that improvement in service delivery has a significant and positive impact on country's financial performance and credit ratings. DTI Congo's online service prices should be cost-based and the service new price should be calculated as new service price = direct costs + overhead costs + profit margin. Under this pricing strategy, DTI Congo should determine expenses from e-governance infrastructure and labour, adds percentages for overhead and profit, and thereby arrives at the price. Data collected in Table 5.12 indicates that 57.2% of respondents strongly agreed; 12.6% agreed, which totals 69.8% (57.2% plus 12.6%), who believe that online business registration system adoption will re-position DTI Congo as lean organisation.

6.3.1.8 Online business registration will re-position the organisation vis-à-vis internal customers (employees)

Correlation analysis in Table 5.16 revealed that technology ($r = 0.271$) and personal growth ($r = 0.055$) were significantly correlated to internal communication at the 0.01 level, and only nature of work ($r = 0.135$) was significantly correlated to personal

growth at the 0.05 level. More than that, data collected in Table 5.12 indicates that 57.2% of respondents strongly agreed; 12.6% agreed, which totals 69.8% (57.2% plus 12.6%), who believe that online business registration system adoption will reposition DTI Congo as lean organisation in the mind of its internal customers (employees). Successful organisation re-positioning requires to change the way services have been being offered. Thus, online business registration adoption is one of the tools an organisation can use to re-position due to major shifts in the business environment.

6.3.1.9 Online service in public organisations will re-brand the Congo

E-governance will enable electronic data business integration and distribution, thus branding the nation. The reason is that various organisations in Congo-Brazzaville engage in economic and business data collection for projection purposes. Online business registration adoption would be the main avenue of business data distribution to all stakeholders such as the Ministry of SMEs, the CFBAP, the DoL, taxation, the high court, the NCS, the SSD, unions, the IMF and the World Bank. The electronic version of business registration has the potential to integrate data of every step in a single click. This finding relates to the second objective of the study, which was to establish data integrating a conceptual framework of online business registration for the DTI Brazzaville office, against which the traditional one can be assessed.

6.4 Nation branding strategy

Arguably, normative model of online business registration for DTI Congo will be designed as part of nation branding strategy. Indeed the nation branding strategy should encompass the overall programme to brand the country and spearhead and manage the re-branding of DTI Congo. Insufficient knowledge among employees underlines that an independent institution should be created with the DTI Congo to oversee nation branding programme.

Congo branding strategy will consist of stakeholder identification, development of nation branding vision, goals and objectives expanding into other fields. There will be a need to segment markets, target specific niche markets and position Congo branding strategy. Further the strategy will involve appointment of Congo brand ambassadors to facilitate promotion. This finding reveals that research secondary objective: determining how DTI Congo's online business registration platform can become a source of competitive nation branding for ease of doing business; was attained.

6.4.1 Eligible Congo brand ambassadors

The appointment of brand ambassadors is the starting point of a nation branding strategy. Public organisations who embrace ICTs to deliver services would be the first brand ambassador for Congo-Brazzaville. Other contenders include private firms and governmental agencies delivering services to the public. Lastly, individuals playing as reference groups will be part of Congo brand ambassador contention. However, the main characteristics of brand ambassador is that they must have a positive reputation and able to positively impact on other stakeholders.

6.4.2 Nation brand strategy implementation

Implementation involves the actual execution of the overall strategy and will encompass the following issues:

- Information Systems resource mobilisation and deployment in all governmental agencies;
- Participation and involvement of all Congolese consumers in online services to promote the brand;
- Creation and management of external offices;
- Promotion of the Congo as brand through advertising, public relations, publicity, cultural, political and economic diplomacy, sponsorships and at international forums.

6.4.3 Congo branding programme expectations

Successful implementation of Congo branding programme should lead:

- to public organisations competitive advantage,
- established structures enabling online marketing,
- economic development,
- inward investment,
- lucrative export markets;
- Increased tourist arrivals and spend;
- Attraction of skilled human resources;
- Return of Congolese who had emigrated;
- Improved standards of living and quality of life;
- Better international image, recognition and influence;

- Rapid industrialisation and development of excellent and modern infrastructure;
- Job creation;
- Increased GDP;
- Hosting of international events; and
- Improved credit rating and access to cheaper finance.

6.5 General conclusions

Laborious efforts have been made in the preceding chapters and sections to conceptualise the underpinning theory of e-governance adoption and its possible implications at DTI Congo's model. The study has found that there are various benefits of an online business registration normative model implementation at DTI Congo.

However, considering the need to improve working conditions at DTI Congo DTI, the organisation should integrate dynamic capabilities to reconfigure its resources (employees) and generate sustainable competitive advantage. Nevertheless, there is a positive relationship between the online business registration model and service marketing in at DTI Congo. Indeed, the problem statements of this thesis were specified earlier as follows:

- Despite resultant benefits namely increased efficiency, effectiveness and improved service delivery that offer e-governance in making services nearer to citizens and easing the strenuous processes involved in manual operations,
- Not all managers at the DTI Congo advocate the adoption of online business registration system,
- The research problem is that insufficient advocacy of online business registration enforces the void of re-branding and re-positioning in the mind of internal customers (employees) as lean and innovative organisation. Indeed, the findings of this research collaborate with the above mentioned problems.

In fact, online service *per se* is not associated with innovative outcomes in the organisation. Rather, there are several dimensions including expertise and training that impact on the effectiveness of service delivery and its link to innovative outcomes.

These over-emphasise effects have been tackled in almost all the preceding chapters. However, sections in chapter 2.3 has clearly indicates other dimensions to consider for e-governance adoption in service organisation. Amongst them, team expertise, teamwork, training, experimental culture, real-time information communication culture, and training are listed. Confucius, a million years ago said: *"if you are thinking in terms of one year plant a tree. If you are thinking in terms of years plant trees. But, if you are thinking in terms of a hundred years educate the people"*. The current researcher's attempt is in the last phrase, arguing that time has come for DTI Congo to motivate employees and evaluate their 4th stage of e-governance adoption.

The journey of one million kilometres begins with a step and every beginning has an end. As mentioned earlier, the statement of the research problem of the thesis points to the assertion that, despite resultant benefits namely increased efficiency, effectiveness and improved service delivery that offer e-governance in making services nearer to citizens and easing the strenuous processes involved in manual operations, not all managers at the DTI Congo advocate the adoption of online business registration system. The research problem is that insufficient advocacy of online business registration enforces the void of re-positioning for market and re-branding as lean organisation. Based on the above-mentioned, the research objectives were focus on proposing a normative marketing model of online business registration for competitive nation branding.

In order to attain the study objectives, various literature were explored to understand e-governance readiness in different countries, and an extensive literature review, of relevant topics, was conducted. National and international studies, relating to the topic, were explored. Experts in the IS field and service marketing were contacted for advice; survey questionnaires were distributed and focus group meetings outcomes were correlated with observation technique results. The nature of data dictated qualitative and quantitative methodologies. The Internet, university libraries, textbooks, and journals were resorted to for reliable information. As much as possible, lucidity was adopted to structuralise the thesis, so that even an emerging researcher in the field could sequentially understand the direction of the research.

Chapter one provided an introduction to the thesis topic, a brief explanation of the background, the purpose of the study, the research methodology and objectives, and the importance and relevance of the research.

Chapter two presented a literature review of published literature sourced from publications and marketing journals to identify and expose existing data and evidence that validates current online service delivery practices in public organisations. It further elaborates on e-governance, which is the adoption of ICTs in public service. The chapter further argues that relationship exists between service organisation value chain, service-enabled technologies adoption, and nation branding strategy.

Chapter three elaborated on the underpinning theory. Online business registration being intended by the government to make support services available to entrepreneurs and making services nearer to the citizens, has been looked at as e-governance; through which the phenomenon was studied. The underpinning was technology acceptance theory based on evidence pointing the government usage of ICT to ease the strenuous processes involved in manual operations. In line with lean organisations, resultant benefits of thereof namely increased efficiency, effectiveness and improved service delivery were perceived not only as re-positioning efforts; but as framework that facilitated the understanding and interpretation of the social phenomenon.

Chapter four delineated the research design and methodologies that was undertaken in this thesis. It also included considerations such as the research design and sampling techniques, procedure and methods that were used to collect and analyse of the data and hypotheses which were tested.

Chapter five documented the results of the survey and conducted analysis and interpretation. The objective of this chapter was to conduct a comparison of the study's empirical results with existing literature and theories regarding the thesis topic. The reveals research key findings which include results from observation, focus group discussions, statistics analysis of research variables, Cronbach's coefficient, correlation, regression and mediator factors analysis. The Chapter also presented the arguments for a normative online business website adoption at the DTI Congo-

Brazzaville and suggests such model to the DTI Congo.

This chapter six discussed in detail the main finding of this study and converged the results from previous chapters. The chapter further clarified how the results and conclusions related to the literature and theory in the domain of e-governance, service marketing management, and nation branding converge. Finally, the chapter proposed a normative model of online business registration Website for DTI Congo based on Backus's e-governance model.

6.6 Recommendations

The recommendations are specifically based on e-governance adoption. These recommendations are based on the findings, which are linked to the methodology that was used in the research. The recommendations also take into consideration the online business registration normative model, which suggests need for innovations. The recommendations are listed below:

6.6.1 Recommendation 1

There is a need for re-branding both DTI Congo and CFBAP. Both institutions to review their business process, procedures, and policies, to allow participation of all stakeholders. This recommendation is based on the reality in Congo-Brazzaville, where less public organisation focus less on brain gain.

6.6.2 Recommendation 2

There is a need to implement online business registration re-branding Congo as investment destination. DTI Congo should empower CFBAP to simplify business registration. The fact of issuing 3 business registration numbers to one registered business creates confusion and corruptions. The prevailing status of DTI Congo to ease businesses did not assist entrepreneurs who registered businesses in the brick-and-mortar. A new policy should be instituted to avoid the plethora of business registration numbers.

6.6.3 Recommendation 3

DTI Congo should enable the creation of the Congolese Business Intelligence Centre (CBIC). The CBIC should gather business intelligence for nation branding purposes.

6.6.4 Recommendation 4

DTI Congo should consider adopting an online business registration normative model to improve working conditions and motivate employees in the process. Online business registration will add value in the process and reduce the incidence of occupational crime. It will also provide time, place, and form utilities to online applicants and increase productivity in a way that reduces weekend work and over-time.

6.6.5 Recommendation 5

In respect of DTI Congo's online business Website information reliability, the Congo-Brazzaville legislator should endeavour to give room to e-governance legislation. Indeed, e-governance can only thrive in the presence of effective legislation. Moreover, creating new legislation in the area of e-governance will require an addition to the public budget, which will be adjusted by the government. The rationale is that Congolese Internet legislation will enable online service delivery technologies.

6.6.6 Recommendation 6

The DTI Congo's online business registration should enable process integration. It should increase speed in financial operations; a quick process of VAT declaration; improve customs declaration; easy environmental permits application; reduce advertisement costs; increase corporate profits and the country's GDP; reduce operating costs; increase return on investment; facilitate procurement and the flows of data to all stakeholders.

6.6.7 Recommendation 7

The Ministry of SMEs should suggest DTI Congo to consider reviewing the process cost of business registration. Creating new departments and attracting and retain new employees will reduce the burden of the current ones involved in the process.

6.6.8 Recommendation 8

DTI Congo should consider removing subjective barriers between male and female employees and given them all equal chances for accessing ICT training. This must be taken into consideration because it holds the organisation backwards.

6.6.9 Recommendation 9

DTI Congo should consider to clarify information in its current e-governance website because both citizens and employees do not know the fees charged for someone who wants to apply for business permit in the sector of agriculture and marine transport.

6.6.10 Recommendation 10

DTI Congo to consider removing bank account as condition before registering business that is confusing when CFBAB managers require business permit applicants to submit bank account for the business on the day of the application. Yet, banks do not allow non-registered business to open bank account.

6.6.11 Recommendation 11

Further research should be conducted to analyse the financial performance of CFBAB's online business registration system because online business registration service will require operating costs.

6.6.12 Recommendation 12

Further research should consider the marketing implications of e-governance in service delivery in Congo-Brazzaville. In addition to that, the research should analyse policy mechanisms, which could protect Congolese citizens' data.

6.6.13 Recommendation 13

Further research should investigate the e-commerce readiness of Congolese SMEs outside of Brazzaville and Pointe-Noire and the importance of empowered banking sector the in country. The current political situation of that country, where the president wishes to continue ruling unconstitutionally, is a serious threat to the economy.

6.6.14 Recommendation 14

Most governments in Central African countries should apply a normative model in the online business registration sector. Taking into consideration all the factors, which could influence the transformation of the market, a normative model should be considered as a benchmark to change the business registration sector. This change will require strong support from the government. Therefore, it will require strong implementation from policy makers.

6.6.15 Recommendation 15

There is a need to create a conducive and enabling business environment to promote economic diversification should DTI Congo consider Internet as nation branding tool. The current IS readiness is not conducive enough for the ease of doing business and sustenance of a strong and successful nation brand.

6.6.16 Recommendation 16

There is a need to develop nation brand before business brand. The country has business brand that preceded nation brand instead of vice-versa. Arguably, it is ideal to develop a nation brand first, which later creates the overall framework, within which sub-brands such business registration, telecommunication and education, and other sector brands can be established.

6.6.17 Recommendation 17

There is a need to institutionalise government departments branding activities. As mentioned earlier, branding public sector is complex and time consuming exercise that goes beyond advertisement and publicity. The researcher recommends that the CBIC's mission to include designing, development and management of a nation brand programme for Congo-Brazzaville.

The CBIC would be established as statutory body funded by the Congolese national treasury to spearhead IS readiness in government departments and manage nation branding process. This organisation should be apolitical and should be operated by qualified professionals drawn from different sectors of the economy. The board of directors of this institution should be constituted by high ranking representatives from both the public and private sector.

6.6.18 Recommendation 18

There is a need to appoint nation brand ambassadors. In the efforts of branding Congo, credible, believable and reputable companies and individuals should be appointed as brand ambassadors advocating ICTs adoption in public sector organisations.

6.6.19 Recommendation 19

There is a need for benchmarking against best practices. The study acknowledges that e-governance alone does not bring innovation. In that context, there are cases of successful and unsuccessful ICTs for nation branding. The researcher thus recommends that before any other Central African country embarks on considering e-governance as a nation branding tool, it is advisable to carry out study tours of successful cases such as South Africa in order to draw some lessons from their experience instead of trying to “*reinvent the wheel*”.

6.6.20 Recommendation 20

There is a need to communicate corporate branding efforts effectively with all employees in the organisation. Effective internal communication would raise employee morale and commitment through shared beliefs and vision. Thus, managers and employees would share the same understanding of the brand promise, which reflects in behaviours and values the promise demands. It would be recommended to adapt organisation business policies, procedures and practices such as recruitment, training and rewards to brand promises requirements.

6.6.21 Recommendation 21

There is a need to create and integrate marketing and communication functions at the CFPAB. Branding professional has to sit on the Executive Committee of the government department in charge of business registration. The rationale is that when employees understand that branding instructions are genuine and coming from the Executives, they align their attitudes and behaviour to the brand values. Arguably, the result is expected to bring greater job satisfaction.

6.6.22 Recommendation 22

There is a need to establish a brand management committee. Although it is the marketing function that manages the implementation of the brand initiative, however,

the CEO owns the brand. Thus, a brand council should be set up at the DTI Congo and have the key functions.

6.6.23 Recommendation 23

There is a need to decentralise branding efforts and invest in human resource management. Considering that CFBAP of DTI Congo has decentralised offices in various cities, part-time employees and contractors would be engaged in branding efforts. However, such engagement would require an investment in hiring and training. It is recommended that the Human Resource (HR) function plays a key role in the implementation of the branding initiative. Brand implementation would require “brand police unit” for the enforcement of branding guidelines and policies.

6.6.24 Recommendation 24

There is a need to link branding efforts to potential high quality and user-friendly e-governance website of DTI Congo. Brand decentralisation is positively related to branding efforts integration. Design appeal and dynamic e-governance website has the potentials to link employee branding efforts in one portal where everyone’s task can be monitored.

6.6.7 RESEARCH CONTRIBUTIONS

This section reviews the theoretical, the methodological and the practical contributions of the research.

6.6.7.1 Theoretical contributions

The study contributed to theoretical motivation, conceptual and terminological foundations in the IS field and marketing. Motivational background is the “why” of the theory in the IS field, hence argued that beyond better, in order to mature as a discipline, IS would have to seek for better explanations. Hence, the importance of the field’s theoretical development. From the above, one can argue that a key argument for theory in doctoral level is that it was a vehicle for informing and guiding the discovery and creation of new knowledge by allowing researchers to build on more

basic explanations previously established by other colleagues. Thus, theories facilitated knowledge accumulation in the process of scientific discovery. Khazanchi and Munkvold (2000) share the views that theory is a cumulative tradition that helps disciplines to advance their understanding of the investigated subjects and to use that knowledge to solve problems in organisations.

An aspect that has further promoted the theory debate in the IS field is the ongoing and intense discussion in the field of marketing management research, which has witnessed a number of landmark contributions that seem to periodically provide an opportunity for scholars of this discipline to synthesise and advance their disciplinary understanding of what theory is and means for their research (Mueller & Urbach, 2013). Building on what can be learned about what theory is and how it can be theorised, the following two sections synthesise the state of the discussion on theory across the IS discipline and its implications.

Conceptual foundations is the “what” in the IS field, and was defined a vessel to document human understanding of the world. However, Sutton and Staw (1995) choose a reverse approach and arguing that simple references to previous publications, standalone empirical data, lists of variables, constructs, diagrams, and hypotheses by themselves have less theoretical contributions. While the challenge to conceptually grasp what theory is can be regarded comforting, it also means that limited guidance is provided for current research that intends to move the IS field forward theoretically.

Bacharach (1989) anticipates the above challenge and posits that theory is a system of statements targeted at describing, explaining, and predicting real world phenomena. Drawing from Bacharach (1989)’s work, it is agreeable that a scientific theory is a system composed of two core constituents: (1) constructs or concepts and (2) propositions as relationships between those constructs. Putting these two constituents together, the system should present a logical, systematic, and coherent explanation of a real-world phenomenon within certain boundaries.

Terminological foundations of theorising is the “how” of theory in the IS field. Theorising can be understood as a form of reasoning, that is, an attempt to craft conceptually convincing argument to describe, explain, and predict phenomena observed in the empirical world (Ochara, 2013). In this avenue, theoretical reasoning can be conceived

as the process of using existing knowledge to draw conclusions, make predictions, or construct explanations. Part of theorising thus is the usage of general knowledge to explain and predict individual cases. In return, general knowledge is built from an additive understanding of repeated observations of similar phenomena in the past. Theorising, thus seems to be an iterative and never-ending process; from the specific to the general, and from the general back to the specific. These two parts of the process are termed inductive and deductive reasoning respectively.

6.6.7.2 Methodological contributions

This study employed content analysis methodology to identify the challenges of e-governance adoption at DTI Congo. Content analysis is defined as a set of procedures for collecting and organising non-structured information into a standardised format that allows one to make inferences about the characteristics and meaning of written and recorded material (Onyancha, 2017). Several documents were scanned for information about the challenges of e-governance adoption in Africa. Existing statistics were used to support the arguments presented in the findings section, especially in regard to the challenges of e-governance. Specifically, three Internet sources were used to provide statistics about the availability of information and communication technologies (ICTs) in South Africa, on the one hand, and the Internet usage, on the other. These sources are:

1. DTI South Africa: <http://www.thedti.gov.za/> this site reflects a dynamic industrial, globally competitive South African economy, characterised by inclusive growth and development, decent employment and equity, built on the full potential of all citizens.
2. Company and Intellectual Property Commission: <http://www.cipc.co.za/za/> this site offers online business registration in South Africa.
3. Department of Trade and Industry Congo. <http://www.congo-info.com/minister/35> this site reflects DTI Congo's e-governance 3rd stage.

SPSS was used for quantitative data. Because the aim was to group correlation analysis in one table, Cronbach's coefficient was used to avoid testing relationships between unrelated variables. Only when the results of Cronbach's coefficient alpha were satisfactory (between 0.70 and 0.84), correlation analysis was conducted. However, just testing relationships between variables was not enough, hence regression analysis was used to estimate the strength and direction of the relationship

between variables. That was possible only when the variance inflation factor (VIF) was calculated and all VIF values were less than 5, indicating there was no multicollinearity problem in the model.

6.6.7.3 Practical contributions

PEOU of DTI Congo's e-governance can explain behavioural intentions of employees' satisfaction with the system (the F-ratio of 14.90). Results of this study can help to implement normative marketing model of online business registration re-branding and re-positioning the organisation in the mind of its internal customers (employees). Considering that online business registration has the potentials to improve service delivery, the application of this research findings can transform DTI Congo's performance, and improve internal communication, job satisfaction and motivate employees. This research output has the potential to ignite the creation of Congolese Business Intelligence Centre (BIC), which does not exist yet. The BIC will be a learning curve for employees to accumulate knowledge.

6.6.7.4 Assessing the contributions

Whetten (1989) identified four aspects to be taken into account as part of an assessment of the contribution made by a research study to the body of knowledge in the particular field. These are as follows:

1. The main concepts included in the explanation of this social phenomena include online business registration system, which is investigated through the underpinning revealed to be positively related to corporate brand personality. Given the above, the factors conclude that theoretical contributions enabled clarifying a future multi-disciplinary research agenda in terms of e-governance readiness and branding theories for public organisation in the developing countries.
2. The above factors namely e-governance adoption, organisation re-branding and re-positioning and the underpinning theory can positively contribute to quality service delivery when reconciled with other dimensions such employees' expertise, and training.

Given Whetten's framework for the assessment of the contribution of this research,

the conclusion of this research study both answers the study's questions and generates new ones.

6.6.8 FUTURE RESEARCH

The study was considered to be a social constructed one and therefore assumed adopting ontologically subjective and objective position. The findings obtained in this thesis display some shortcomings and these limitations should be recognised when interpreting the findings, while also recognising opportunities that they present for further research. The study concludes by defining the boundaries of the case study, and provides promising avenues for future studies in the area of online service in public departments in Congo-Brazzaville as nation branding tool.

6.6.8.1 Legislation reform initiatives

One of the challenges of branding a nation as investment destination is the need to separate politics and business in the country. The Act N° 36-2011 of 29 December 2011, the section 8 of the Act N° 36-2011 of December 29 2011 fixing business registration fees lower for nationals and higher for foreigners and are politically motivated. However, no research has been conducted to establish the impact of politically motivated business registration fees policy on nation branding.

6.6.8.2 Nation branding initiatives

Currently, nation brands are equated to corporate brands because nations represent umbrella brands where sub-brands such as tourism, investment, export, transport and manufacturing can grow. In Congo-Brazzaville, there is a research gap in terms of a model that explains how Congo as brand can be integrated within sub-brands in order to build sustainable brand equity for the nation brand and its affiliate brands.

6.6.8.3 Integration of information systems in nation branding strategy

Considering information systems as nation branding tool would reflect seasoned thinking, convey completeness and thoroughness of the Congolese government willingness to attract investments. There is a need to conduct research aimed at separating political leaders from Congo as brand. Thus, it is imperative for future research to focus much on establishing the business impact of information systems in marketing and advertising.

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Appendix A: Questionnaire

ONLINE BUSINESS REGISTRATION AT THE DEPARTMENT OF TRADE AND INDUSTRY IN THE CONGO: A NORMATIVE MODEL



Dear DTI Congo employees,

The researcher is doing D Tech in marketing at Cape Peninsula University of Technology with strong focus on E-governance. The purpose of this questionnaire is to analyse the challenges in creating online business registration model for DTI Congo-Brazzaville. The information given will help us to set invaluable standards for DTI Congo's potential e-governance website. We would like to emphasise that your responses will be anonymous and will not be used for any other purposes.

For any query, please contact us on the details below:

Researcher: Alain Michael Momo. Email: Momomike161@gmail.com

Supervisor: Michael Twum Darko, PhD. Email: darkom@cput.ac.za

Section 1: Demographic data

The information you provide in this section will be used for profiling purposes only.

Please tick (√) only appropriate box:

1		Gender							
Male	1	Female	2						
2		What is your highest level of education?							
Primary school	1	High school	2	College	3	University	4		
3		How many years have been working for the DTI Congo?							
0-2	1	3-5	2	6-8	3	9-11	4	12 or more	5

Section 2: Content-based data

Focus group questions

4	Which benefits would you associate with an online business registration system adoption for DTI Congo?
5	How does online business registration system re-brand DTI Congo vis-à-vis to its internal customers (employees)?
6	Which challenges do you associate with online business registration adoption?
7	How does DTI Congo's online service website affect service value chain?
8	What are the service processes, procedures, and policies of business registration?

Instruction: Please read each statement before answering. Tick (√) appropriate box and give only one response for each statement.

Statements	Represent the following: 1. Strongly agree 2. Agree 3. Disagree 4. Strongly disagree 5. Not sure Recommendation: circle the number that applied from the four response alternatives.				
ONLINE SERVICE ADOPTION HAS POTENTIALS TO RE-BRAND AND RE-POSITION THE ORGANISATION					
9. Online system adoption has the potential to re-brand DTI Congo.	1	2	3	4	5
10. Online system adoption has the potential to re-position DTI Congo.	1	2	3	4	5
11. DTI Congo considers employees as its internal customers.	1	2	3	4	5
12. The physical aesthetic of online service system will stimulate employees to deliver better service.	1	2	3	4	5
13. DTI Congo's management team, policies and business registration procedures are readily available for online system adoption.	1	2	3	4	5
14. Online service adoption will create alternatives for employees to improve communication with stakeholders.	1	2	3	4	5
SERVICE MARKETING IN PUBLIC ORGANISATION AND ELECTRONIC CHANNELS					
15. As employee, I understand the difference between a service and a product.	1	2	3	4	5
16. As employee, I understand the difference between marketing a service and marketing a product.	1	2	3	4	5


17. DTI Congo has Strategies for delivering service quality through employees (internal customers).	1	2	3	4	5
18. DTI Congo has business strategies that innovation in service delivery.	1	2	3	4	5
19. DTI Congo understand the frustration front-end employees in service delivery process.	1	2	3	4	5
20. DTI Congo considers delivering services through agents and brokers.	1	2	3	4	5
21. DTI Congo has developed strategies for effective service delivery through intermediaries.	1	2	3	4	5
22. DTI Congo has the capacity to adopt and manage online service.	1	2	3	4	5
23. DTI Congo has strategies in place for matching service capacity and demand.	1	2	3	4	5
24. DTI Congo has alternative strategies when service capacity does not match demand.	1	2	3	4	5
25. DTI Congo has service recovery strategies.	1	2	3	4	5
26. DTI Congo has service guarantee policy.	1	2	3	4	5
27. DTI Congo has internal and external communications management strategies.	1	2	3	4	5
28. DTI Congo is aware of the financial impact of quality service delivery.	1	2	3	4	5
E-GOVERNANCE AND SERVICE DELIVERY IMPLICATIONS AT DTI CONGO					
29. As employee, I understand what e-governance is.	1	2	3	4	5
30. As employee, I understand the stages of e-governance in service organisation.	1	2	3	4	5
31. As employee, I understand the types of interactions in e-governance.	1	2	3	4	5
32. E-governance adoption requires team expertise.	1	2	3	4	5
33. E-governance adoption requires team work.	1	2	3	4	5
34. E-governance adoption requires experimental culture.	1	2	3	4	5
35. E-governance promotes real-time communication within the organisation, and with stakeholders.	1	2	3	4	5
36. E-governance adoption requires employee training.	1	2	3	4	5
37. There is relationship between e-governance, service marketing and quality service delivery.	1	2	3	4	5
38. As employee, I am aware of e-governance models.	1	2	3	4	5
39. As employee, I am aware of successful e-governance models adoption in other countries.	1	2	3	4	5

BENEFITS AND CHALLENGES OF E-GOVERNANCE ADOPTION AT DTI CONGO					
40. E-governance adoption is associated with some benefits.	1	2	3	4	5
41. E-governance is associated with some challenges.	1	2	3	4	5
42. Bureaucratic culture at DTI Congo is a challenge to e-governance adoption.	1	2	3	4	5
43. The general level of employees' IT skills is a challenge to e-governance adoption.	1	2	3	4	5
44. The lack of legal framework is a challenge to e-governance adoption.	1	2	3	4	5
45. Lack of committed leadership and management is a challenge to e-governance adoption.	1	2	3	4	5
46. Lack of employee awareness and confidence of e-governance is a challenge to e-governance adoption.	1	2	3	4	5
47. Security threats over the protection of government classified information is a challenge to e-governance adoption.	1	2	3	4	5
E-GOVERNANCE ADOPTION AND EMPLOYEES BEHAVIOURS AND PERCEPTION					
48. Employees at DTI Congo are concerned with e-governance systems Perceived ease-of-use (PEOU).	1	2	3	4	5
49. The Internet created an opportunity for public service organisation to reach out to citizens in a direct way.	1	2	3	4	5
50. Employees at DTI Congo are concerned with external factors for e-governance adoption.	1	2	3	4	5
51. Managers' attitudes and subjective norms are determining factors in e-governance adoption.	1	2	3	4	5
52. Managers' perception is determining factor in e-governance adoption.	1	2	3	4	5
53. E-governance adoption will depend on how well the new technology fits the requirements of DTI Congo striving to deliver quality service.	1	2	3	4	5
54. DTI Congo's assets can lead to e-governance adoption.	1	2	3	4	5
55. E-governance adoption would be source of DTI Congo's competitive advantage.	1	2	3	4	5

Thank you very much for your contribution. If you wish to have the analysed results of this questionnaire when it is available please provide your e-mail address or other information below.

Email address: _____

Appendix B: Sample Calculation Table

	REQUIRED SAMPLE SIZE									
	Confidence Level = 95%					Confidence Level = 99%				
	Confidence Interval					Confidence Interval				
	Population Size	5.0%	4.0%	3.0%	2.0%	1.0%	5.0%	4.0%	3.0%	2.0%
20	19	19	20	20	20	19	20	20	20	20
40	36	38	39	39	40	38	39	39	40	40
60	52	55	57	59	60	55	57	58	59	60
80	66	71	74	77	79	71	74	77	78	80
100	80	86	91	96	99	87	91	95	98	99
120	92	100	108	114	119	102	108	113	117	119
140	103	114	124	132	138	116	123	130	135	139
160	113	126	139	150	157	129	139	147	154	158
180	123	138	154	167	177	142	153	164	173	178
200	132	150	168	185	196	154	168	180	191	198
220	140	161	182	202	215	165	181	197	209	217
240	148	171	196	218	234	176	195	212	227	237
260	155	181	209	235	253	187	208	228	245	256
280	162	191	222	251	272	197	220	243	262	275
300	169	200	234	267	291	207	233	258	280	295
320	175	209	246	282	310	216	245	273	297	314
340	181	217	258	298	328	225	256	287	314	333
360	186	225	269	313	347	233	267	301	331	352
380	191	233	280	328	366	242	278	315	348	371
400	196	240	291	343	384	250	289	329	365	391
420	201	247	301	357	402	257	299	342	381	410
440	205	254	312	372	421	265	309	355	398	429
460	210	260	321	386	439	272	319	368	414	448
480	214	267	331	400	457	279	328	381	430	467
500	217	273	340	414	475	285	337	393	446	485
520	221	279	350	427	493	292	346	406	462	504
540	225	284	359	441	511	298	355	418	478	523
560	228	290	367	454	529	304	364	430	493	542
580	231	295	376	467	547	309	372	441	509	560
600	234	300	384	480	565	315	380	453	524	579
620	237	305	392	493	582	321	388	464	539	598
640	240	310	400	505	600	326	396	475	554	616
660	243	314	408	518	618	331	403	486	569	635
680	246	319	415	530	635	336	411	497	584	653
700	248	323	423	542	652	341	418	507	599	672
800	260	335	435	524	664	353	430	519	611	684

APPENDIX C: RESEARCH SUPPORT LETTER



MINISTER DU COMMERCE
ET DE L'INDUSTRIE
REPUBLIQUE DU CONGO

VILLE DE BRAZZAVILLE

SOUTIEN DE RECHERCHE: RESEARCH SUPPORT LETTER

A L'ATTENTION DE MR. ALAIN MICHAEL MOMO
CAPE PENINSULA UNIVERSITY OF TECHNOLOGY (CAPE TOWN-RSA)
Email: Momomike161@gmail.com

BP: 4802, Cape Town 8000, RSA.

FROM:

Province.....BRAZZAVILLE.....
Ville deBRAZZAVILLE.....
DOSSIERN° 513/06 AR 11.....
.....
LE 03/02/2014
.....A été offert.....
Cette acceptation de soutien de recherche sur le E-COMMERCE.....

TO:

ALAIN MICHAEL MOMO
CAPE PENINSULA UNIVERSITY OF TECHNOLOGY (CPUT)
CAPE TOWN -RSA.....

Durée: DUREE DE SES ETUDES DE DOCTORAT.....
Nationalité.....Congolaise.....
Profession.....Etudiant.....
Domicilié A.....KINSHASA.....
Commune de.....Mont-Ngafula
Villa.....414.....

Cette autorisation est valide à Goma. Nous demandons aux autorités civiles et militaires de lui appoter toute aide et protection légitimes.

CLAUDE TSHILOMBO RAIS

DTI CONGO-BRAZZAVILLE

DATE: 03/02/2014

Appendix D: Map of Congo-Brazzaville in Africa



(Source: Google, 2017)