

**IMPACT OF OPERATIONAL EXCELLENCE ON ORGANISATIONAL
PERFORMANCE: A CASE STUDY OF FIRST NATIONAL BANK ZAMBIA**

By

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- Siakacha Ceasar
- Karen Kapotwe Kapundu

DEDICATION

*To my unborn children ... You have kept me motivated.
May you prosper, live up to and exceed expectations!!!*

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ABSTRACT

Operational excellence and innovation have been found to be key factors for proper performance and growth of an organization. This study looked at the performance of the operational model at First National Bank – Zambia (FNBZ) and how the operations model impacted on to the performance of the bank. The aim of the research was to create an innovative strategic operational excellence framework that will enable, based on defined organisational performance dimensions, to be applied in order to improve and sustain organisational performance for FNBZ. The model used in this study was developed from existing literature on organizational diagnostic models and from a broad literature that identified the factors influencing the performance of an organization based on operational excellence. The specific objectives of the study focused on describing the dominant characteristics of operations, establishing the barriers of implementing a strategic operational excellence model; and evaluating the impact of the current operations model on organization performance at FNBZ. The research process followed a pragmatic philosophical approach and was informed by a cross-sectional case study. A mixed-method research design was applied. The study population included employees as well as customers of the bank. The study applied random sampling of 32 customers and 100 employees. The research also applied purposive sampling on targeted employees for interview sessions. The results of this study also provide key information on the relationship between the performance measurement process and organizational performance and uncovers the close relationship between operational excellence and innovation both key to strategy development and management.

Keywords: Organisational Performance, Operational Excellence, Performance Measurement Process, Operations Performance, Innovation, Strategy, Operations Strategy.

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ACRONYMS

ANOVA	Analysis of Variance
ATM	Automated Teller Machines
BOZ	Bank of Zambia
BPM	Business Process Management
CBPP	Certified Business Process Professional
CNPS	Customer Net-Promoter Score
CR	Change Request
CRM	Customer Relationship Management
DMAIC	Define Measure Analyze Improve Control
DOI	Diffusion of Innovation
EFQM	European Foundation for Quality Management
ENPS	Employee Net Promotor Score
FNBZ	First National Bank Zambia Ltd
GDP	Gross Domestic Product
HRM	Human Resource Management
KPI	Key Performance Indicators
KYC	Know Your Customer
LSS	Lean Six Sigma
NBB	Number of Bank Branches
OECD	Organization for Economic Co-operation and Development
OE	Operational Excellence
OLS	Ordinary Least Square
PPORF	Practical Program of Revolutions in Factories
QA	Quality Assurance
SPSS	Statistical Package For Social Sciences
UAT	User-Acceptance Testing
UI	User Interface
UNZA	University Of Zambia

CHAPTER ONE

INTRODUCTION

1.1 Introduction and Background

This chapter of the study aims to discuss the problem statement regarding the impact of operation on organizational performance at First National Bank Zambia. It also underlines the research objectives and questions that formulate the basis for the study. A brief background into the study as well as the ethical considerations are highlighted to provide for academic research and unbiased professional justification.

1.2 Background of Study

Organisational performance is such an important aspect for the bank as it spells out the banks likelihood to continue to serve its customers profitability. To serve customers means the bank must have well-defined operations built on processes that work effectively. There is however good reason to believe that the current operation needs improvement and innovation for the bank to remain competitive and profitable as a result of the dynamic business environment and to capture new business opportunities. According to Richard, Devinney, Yip and Johnson (2009), organizational performance encompasses three specific areas of firm outcomes: (a) financial performance (profits, return on assets, return on investment); (b) product and market share performance (sales, market share and customer satisfaction); and (c) shareholder return (total shareholder return and economic value added).

Organizational performance is one of the most important constructs in management research and is the measurement of strategy implementation. A review by the Council on Quality and Leadership (2015) on the operationalization of performance highlighted the limited effectiveness of commonly accepted measurement practices in tapping this multidimensionality. Therefore, addressing these findings requires researchers to (a) possess a strong theoretical rationale on the nature of performance (i.e., theory establishing which measures are appropriate to the research context) and (b) rely on strong theory as to the nature of measures - theory establishing which measures should be combined and the method for doing so). The management research on performance should explicitly address these two requirements.

Duggan (2011) mentions the correlation of organisational performance improvement with operational excellence as implying to have the capacity to critically think innovatively, to experiment with new digital capabilities, as well as the implementation of new innovations in products, processes and services in search of new revenue streams. Resources are always tight, but innovation is essential for growth. Operational Excellence (OE) is defined as a philosophy of problem-solving, teamwork and leadership that can be applied for continuous organisational improvement. It focuses on customer needs first and supports employee empowerment and satisfaction. Operational excellence builds a platform to make innovation and experimentation a priority, and augmenting that operational focus with new Information Technology platforms that support agility and speed which becomes key strategic capabilities that yield competitiveness for the organisation which in retrospect, results in organisational performance improvement (Breyfogle, 2008; Duggan, 2011).

Operational excellence in this view must be considered as a competitive weapon for firms, both in service and manufacturing. Furthermore, as a consequence of a lack of literature on operational excellence in Zambia and more specifically commercial banks, it is apparent that a knowledge gap of in-depth understanding exists.

1.3 Statement of the Problem

At First National Bank Zambia Ltd (FNBZ), it is noted that the bank relies on its various business services to constantly improve on its profitability. This is achieved by constantly focusing on various quintessential dimensions, including i) revenue growth and cost management, ii) client retention and acquisitions, iii) process improvement and optimisation and iv) the development of its human capital. These effectively form the four broad pillars that measures its organisational performance.

The key challenge for the bank is improving and sustaining organisational performance. this requirement in the past 2 years from 2015- 2017 has not been successfully met largely owing to strong competitor manoeuvres, gaps in key operations of the bank and negative macroeconomic factors in Zambia. Further, FNBZ has been impacted with skyrocketing cost-to-income ratios mainly caused by operating expenses that have contributed to the resultant stunted growth for the organisation. In some instances, reporting huge financial

losses. The question why has operational excellence not been achieved for FNBZ and yet it continues to impact on the bank's performance and the growth? Amongst the major factors, the operations factors are intrinsically within the bank's control and thus constitute a plausible means of attaining the set out goals of organisational performance improvement. However, the situation is unclear regarding measurement metrics for operational excellence to deliver on organisational performance though the impact is clear as financial operational losses have been on the increase; operations compliance related incidents have become more prevalent whilst overall productivity has reduced in recent times. Furthermore, there is not a clearly and /or fully defined operations excellence assessment for FNBZ. This represents gaps in the bank's growth strategy. The evidence is that despite some management resource think tanks talking occasionally about it, a deliberate program to foster in operational excellence is non-existent at FNBZ. With this at hand, it is clearly evident that operational excellence is a key strategic capability needed for FNBZ to achieve organisational performance improvement and if the situation is not addressed the unjustifiable and yet controllable costs to operate the bank will accelerate to levels that may cripple the bank or worse, culminating into greater risk of an existential threat occurring.

1.4 Aims and Objectives of the Research

To build a strong research, the researcher is required to define what the aim and objectives of the research are. These should also be defined in such a way as to provoke the situation so that answers may be attained through the research process. Therefore, the following are the specific aim and research objectives for this study.

1.4.1 Aim

The aim of the research is to construct an innovative operations excellence strategic model that will achieve sustainable organizational performance improvement for First National Bank Zambia.

1.4.2 Objectives

In order to achieve the primary objective of the study, the following secondary objectives of the research were identified.

- i) To describe the dominant characteristics of the operations at First National Bank Zambia.

- ii) To evaluate the impact of the current operational model on organizational performance at First National Bank Zambia.
- iii) To establish the barriers affecting implementation of a working innovative operational excellence model at First National Bank Zambia.

1.5 Research Questions

The following are the critical research questions that the study addressed.

1.5.1 Research Questions

- i) What operations factors are considered dominant at First National Bank Zambia?
- ii) How does the operational model impact on organizational performance at First National Bank Zambia?
- iii) What factors act as barriers towards implementation of a successful innovative operational excellence model at First National Bank Zambia?

1.6 Ethics Statement

This research made use of mostly primary data gathered through questionnaires and interviews from employees, senior management and customers.

The research also made use of organisational data on current and historical sales and operational data for further analysis. Any sensitive listed customer information, management information and/or specific data used was treated with strict confidentiality masked beyond specific identification for future researchers and users of this research paper.

1.7 Justification of the study

This study is important to the following stakeholders; regulators, the government, professionals, the organisations in question and academia.

There are a number of persuasive reasons for undertaking the study and a strong and factual rationale for addressing the current situation. The bulk is drawn from the lack of sufficient literature within the Zambian setting and secondly, the inherent need by the FNBZ to improve organisational level performance.

Evidence points to the fact that, little formal studies have been done in Zambia to showcase the usage of an integrated strategy involving operational excellence and innovation and how it can be an immensely sustainable performance enhancing model for businesses operating in Zambia and more so specifically, commercial banks. The research addresses this deficit of empirical research that is supported by sound and established theories to explain short-term dynamics and the long-term impact of operational excellence and innovation on organisational performance.

Regulators can apply the recommendations to formulate standards and guidelines that must be met by organisations for future operational purposes.

Furthermore, the study outcomes will be added to the body of knowledge in the fields of Strategic Management and Operations Management of which business professionals and specialists in fields of strategic management, operations management, finance, legal, and organizational development could use in ameliorating cost-effective and efficient working models.

This thesis also contributes to existing research as it extends our knowledge on the integrated strategy of operational excellence and innovation and its effectiveness on organisational performance by incorporating new variables from this research. The investigations address the significant statistical link between this strategy and organisational performance. It further provides a holistic framework for measuring Organisational Performance with financial and non-financial variables.

For academicians and researchers, the methodology and research design could be employed when designing a wider research project for other service businesses operating in Zambia and thus it is a foundation for furthering research.

Finally, the study presents findings and establishes a strategic working model that can lead to possible practical benefits for the FNBZ, its partners and customers.

Therefore, the summation of these facts necessitates a study.

1.8 Scope of Study

The research is a case study that takes a pragmatic approach investigating and formulating a model framework for achieving sustainable organisational performance improvement through implementation of an integrated strategy of innovation and the application of operational excellence.

The study is anchored mainly within the domain of strategic management and operations and is restricted to First National Bank Zambia (FNBZ) which has commercial banking operations in Zambia.

The research covered data collected from 2016 – 2017 from FNBZ and Bank of Zambia (BOZ). It also encompassed review and adaptation models from established experts on the subject matter.

The data collections methods and models include questionnaires, interviews with key respondents and data sampling of operational data.

1.9 Organization of the Dissertation

This chapter introduced the study. The rest of this dissertation is structured as follows.

Chapter Two – Literature Review: reviews the theoretical and empirical literature behind organisational performance, operational excellence, the banking sector in Zambia, factors affecting operations for FNBZ and commercial banks' performance in Zambia.

Chapter Three –Research Methodology: provides a descriptive outline of the adopted research philosophy, research design strategy, tools and techniques that were applied to obtain and analyse data from the study.

Chapter Four – Research Results Analysis and Discussion: presents the results in the form of Tables and Figures (charts and graphs) to provide for research questions' answers. Discussions of Findings are also presented relating the results of the study to the reviewed literature.

Chapter Five – Conclusion and Recommendations: gives closure to the study by giving a summary of the research findings, provides for detailed concluding remarks, makes

recommendations to the various stakeholders and suggest areas of further research. Chapter 5 also describes the design of the research outcome, the operational excellence model and thus satisfies the aim of the study.

1.10 Chapter Summary

This chapter introduced the study by outlining the background of the study, the statement of the problem, research objectives, questions and propositions, justification of the research and the scope of the study. The next chapter focused on a detailed review of both empirical and theoretical literature on the subject.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter is a summative review of literature from a number of previous works on organisational performance and strategies of formulating and implementing operational excellence. The subject matter is discussed from empirical studies to theoretical models and supporting information with emphasis on strategies developed, implemented and the corresponding outcomes. The definitions of organisational performance, operational excellence, strategy and strategic management are also discussed.

The literature reviewed also includes different schools of thought with emphasis on influential authors and researchers in the subject of organisational performance improvement, operational excellence and strategy. It is also established that the literature on operational excellence for service sectors such as the financial services is still relatively scarce as compared to manufacturing firms. Most published empirical research studies on operational excellence were mainly conducted in the manufacturing sector. However, the researcher has made considerable effort to describe and explain empirical evidence on operations research relating to customer satisfaction and service delivery for service firms.

As a resultant of the status quo, this study attempts to address the gaps in the literature by contributing literature concerning the factors of operational excellence that lead to organisational performance improvement and how a strategic operational excellence model can be applied effectively in financial service firms in Zambia with special reference to First National Bank Zambia Limited.

2.2 Review of Empirical Studies

The researcher attempted to understand and appreciate literature that is available on the topic. The literature reviewed was able to closely relate to the study objectives and address the problem. Thus, the need was established to review studies that had been done and to also determine where the gaps are on the topicality and whether or not the research

being conducted is a worthwhile initiative. The researcher made such effort and uncovered empirical studies closely relating to the topic and the direction of the study. These are discussed in this section and contribute to the significance of the study. These empirical studies are discussed in detail below whilst Table 2.1 document's the empirical studies matrix.

2.2.1 Organizational Performance Improvement in an Oil Producing Facility in Nigeria through Operational Excellence

As stated in section 2.1 of this document, it has been proven to the researcher that there are no known studies that have been done on the subject of operations excellence in the banking sector and its influence on customer and employee satisfaction particularly in Zambia. However, there was a study done on the manufacturing facility in Nigeria done by Ozumba Callistus Ifeanyichukwu (Ifeanyichukwu, 2010). The title of the study was 'Organizational Performance Improvement in an Oil Producing Facility in Nigeria through Operational Excellence'. The study focused on the improvement of organizational performance through the implementation of Operational Excellence at the facility. The researcher presented various models that are applicable to different industries, and which can be adapted to fit organizational needs. The research work took an exploratory approach and was undertaken in the form of a case study of an organisation. 60 employees at the facility answered the questionnaire which was the primary data collection method. The objectives of the study focused on:

- Quantifying the benefits of implementing the Operational Excellence philosophy for continuous improvement in an oil producing company in Nigeria.
- Determining the degree to which organizational performance is improved by the adoption and successful implementation of Operational Excellence.

2.2.2 The Influence of Operational Excellence on the Performance of Kenol Kobil Group in the Rwandan Market

Further, there was a study done on the oil marketing industry in Rwanda by Margaret Nzoka (Nzoka, 2013). The title of the study was 'The Influence of Operational Excellence on the Performance of Kenol Kobil Group in the Rwandan Market'. The research design applied was a case study of empirical data using mainly primary data collection methods. The primary data was collected using an on-line questionnaire. Content analysis was used

to analyse qualitative data while the quantitative data was analysed using descriptive statistics. The study target population was the management employees of Kenol Kobil. The study also used purposive sampling technique to select seven employees in the top management. The study however did not indicate the sample size applied to help valid and confirm the reliability beyond doubt. Further it was noted that it was limited in that it did not prove that it aligned to the overall strategy of the organisation.

2.2.3 Customer Satisfaction in the Banking Sector: A Study of Russian Bank PAO.

In addition to these studies, there exist numerous studies that have been done in the past throughout the world relating to customer satisfaction in the banking sector. One such study was done by Olga Vershinina in 2017 in Russia (Vershinina 2017). The title of the study was ‘Customer Satisfaction in the Banking Sector: A Study of Russian Bank PAO’. The aim of the thesis was to measure the level of customer satisfaction for PAO Bank. The theoretical framework of the research examines the term “customer satisfaction and analyses different models that can measure it. The thesis employed SERVQUAL dimensions, Profit-chain model and International Standards Organization (ISO) standards that are a basis for an empirical research on consumer satisfaction. A priority questionnaire was chosen as a form of a quantitative method. 100 customers of the bank answered the questionnaire. According to the results, the overall customer satisfaction was above average but not excellent. The study discussion outcome stated that the bank should emphasize the importance of customer satisfaction among its employees and take further actions on improving operations in order to enhance the quality of service delivered to the customer. Employee education, beneficial programs for customers and implementation of new features were recommended.

2.2.4 Study of Customer Satisfaction in the Banking Sector in Libya.

Another similar study was done by Logasvathi Murugiah and Haitham Ahmed Akgam in Libya in 2015 (Murugiah and Akgam 2015). The title was ‘Study of Customer Satisfaction in the Banking Sector in Libya’ The purpose of the study was to evaluate the customer satisfaction of the banking sector in Libya, based on customer perception regarding service quality. This is an empirical study using mainly primary data collected through a well-structured questionnaire. The questionnaire had been personally administered on a sample size of 150 bank customers.

This paper made a useful contribution as there were only a few studies dealing with the assessment of service quality in the banking sector of Libya. The findings were based on three different independent variables (service quality, customer loyalty and security) which showed that all the variables influenced consumers satisfaction in the Libyan banking sector. There was also a positive and significant relationship between the customer satisfaction and two variables (service quality and customer loyalty), and there was a negative and significant relationship between security and customer satisfaction.

2.2.5 Customer Satisfaction in the Banking Sector: The Case of North Cyprus.

Another similar study was done in Cyprus with the title ‘Customer Satisfaction in the Banking Sector: The Case of North Cyprus’. This had done by Nesrin Ozataca Tulen, Sanerb Zeynep and Suzmen Senc (Ozataca, Zyeynep and Senc 2016). The aim of the study was to evaluate the determinants of customer satisfaction on higher service quality in North Cyprus Banking sector. SERVQUAL model was used to analyse the perception of customers on determinants of service quality. A total of 207 customers of the major banks in North Cyprus had been surveyed. Empirical analysis was carried out by SPSS 18. Empirical results revealed that customer satisfaction in the banking sector depends on good and firm relations, building trust between customers and bank employees for the case of North Cyprus. Results also suggested that positive word of mouth plays a major role in customer satisfaction.

2.2.6 Impact of the Quality of Service Delivery on Customer Satisfaction in the Nigerian Banks.

In Nigeria, Adesoji Farayibi (2016) did a study. The study examined the impact of the quality of service delivery on customer satisfaction in the Nigerian banks using Ordinary Least Square (OLS) methodology. The study established a relationship between better bank performance in service delivery and customer satisfaction through effective Customer Relationship Management (CRM). Findings revealed that increase in the number of working days and number of bank branches led to better levels of customer satisfaction. Empirical evidence also revealed that increase in profit margin is a function of improved level of customer satisfaction while Number of Bank Branches (NBB) has a positive but insignificant relationship with customer satisfaction because the spread of branch networks or channels has better effects on customer satisfaction than number of banks. It also emphasized the role of the number of working days in achieving better bank

services and profitable customer relationship management. The study thus recommends that the Nigeria banking industry should improve the quality of service delivery as it is a prerequisite for achieving a high level of customer satisfaction.

2.2.7 Examining Factors Influencing E-Banking Adoption: Evidence from Bank Customers in Zambia

In Zambia, Sichisambwe and Sikombe did a study in Kitwe in 2017. The main purpose of the study was to determine the relationship between service quality and the resultant customer satisfaction for both foreign and local banks in Zambia. The paper utilised a quantitative survey design and the five dimensions of service quality tangibility, reliability, responsiveness, empathy and assurance were considered as variables for the study. There are 19 banks in Zambia but only 13 that are operational in Kitwe formed a sampling frame. A structured questionnaire with a 7-point Likert scale was used to collect the data and 120 questionnaires were administered to 6 banks with only 108 returned for analysis. Result of the study showed that the mean expectations of the five dimensions of service quality are higher than the mean perception thereby indicating that in general, customers of both local and foreign banks are not satisfied with the service being offered by the banks. A t-test on all the five dimensions of quality shows that there is a significant difference on four of the dimensions namely tangibility, reliability, responsiveness and assurance. Tangibility dimension shows that clients appreciate the overall outlook of foreign banks which are visually more appealing than for local banks. On assurance customers were impressed with the knowledge and courtesy of the foreign bank's employees and their ability to convey trust and confidence when transacting, while responsiveness showed that foreign banks were more willing to provide prompt services than local banks and finally on reliability, customers of foreign banks were happier with the banks' ability to perform the promised service dependably than local banks. A test on empathy did not show any statistical difference between the two types of banks. These revelations were vital in pinpointing where both local and foreign banks needed to improve service quality delivery amidst increasing competition in the sector (Sichisambwe and Sikombe 2017).

2.2.8 Finance Bank Zambia Plc Retail Customers' Perceptions of Service Quality

Another study in Zambia was done by Machayi J and Ahmed EM (2016). The study examined the nature of factors that influence customer's perception of service quality

provided by Finance Bank Zambia Private Limited Company (PLC). Finance Bank Zambia PLC is a private sector indigenous bank in the country. The study was an analytical study based mainly on the primary data collected through a scientifically developed questionnaire and secondary information sources. Based on the outcomes originating from the literature review, this research had used a modified SERVQUAL scale. The questionnaire to customers was administered on a sample size of 357, chosen on a convenient basis across the branch network. The statistical methods used were as follows: frequencies - to describe the respondent's characteristics; means - to identify level of perception (questionnaire statements); Independent-Samples T-Test - to identify the significance of differences in the means of retail customers and branch staff perceptions of service quality; factor analysis: to identify the differences between customers and bank branch staff in terms of the degree of importance they attached to various dimensions of service quality and Cronbach's coefficient alpha test: to examine scale reliability and internal consistency. All factors namely tangibility, responsiveness, empathy, assurance, image, convenience reliability, access and Automated Teller Machines (ATM) effectiveness qualified to be designated as important because their mean index scores were above 2 and 50% or more of respondents affirmed them to be either 4-very important or 3-important.

Table 2.1 below is a summary of the empirical studies reviewed.

Table 2.1: Empirical Studies Matrix

Author (s)	Article/Research Paper	Methods	Findings and Gaps
Ifeanyichukwu, (2010)	Organizational Performance Improvement in an Oil Producing Facility in Nigeria through Operational Excellence	A cross-sectional case study. Exploratory approach sample size: 60 respondents Data collection tool: questionnaire	The research proved the hypothesis: “Successful implementation of Operational Excellence philosophy as a continuous improvement culture, irrespective of the business environment, leads to improved organizational performance and competitiveness”
Nzoka, (2013)	The Influence of Operational Excellence on the Performance of Kenol Kobil Group in the Rwandan Market	The study used a case study research design. The target population was the management employees of Kenol Kobil both at the Head Office and in Rwanda. Data collection: survey questionnaire and interviews with 7 top level management Sampling: purposive sampling; Data Analysis applied descriptive statistics and content analysis	From the findings, the study concludes that Kenol Kobil Group has adopted operational excellence (OE) initiatives to a great extent to spur the company’s performance and profitability. It applied the Lean Six-Sigma model.
Murugiah and Akgam (2015)	Study of Customer Satisfaction in the Banking Sector in Libya	Study’s aim was to evaluate customer satisfaction levels in the banking sector in Libya. A sample size of 150 respondents was used. Based on three independent variables service quality, customer loyalty and security.	Findings state that there is a strong negative correlation between security and customer satisfaction whilst a strong positive correlation between customer satisfaction and service quality levels.
Vershinina, (2017)	Customer Satisfaction in the Banking Sector: A Study of Russian Bank PAO.	The thesis employed SERVQUAL dimensions, Profit-chain model and International Standards Organization (ISO) standards that are a basis for an empirical research on consumer	According to the results, the overall customer satisfaction was above average but not excellent. Further, the main recommendation was that the bank should emphasize the importance of customer satisfaction among its employees and take further

		satisfaction. A priority questionnaire was chosen as a form of a quantitative method. 100 customers of the bank answered the questionnaire.	actions on improving operations in order to enhance the quality of service delivered to the customer
Machayi and Ahmed (2016).	Finance Bank Zambia Plc Retail Customers' Perceptions of Service Quality	Study was based in Zambia focusing on fiancé bank Zambia ltd. The study took an analytical approach with mainly primary data collected. The researcher applied the SERVQUAL scale.357 survey questionnaire was administered to the respondents. Analysis using T-Test to identify significance of differences in means between retail customers and branch staff on customer service quality.	The alternative hypothesis was accepted that there is significant difference in customer service quality for the following factors: Tangibility, i) responsiveness, iii) empathy, iv) assurance, v) image, vi) convenience reliability, and vii) access to ATMs
Sichisambwe and Sikombe, (2017)	Examining Factors Influencing E-Banking Adoption: Evidence from Bank Customers in Zambia	The paper utilized a quantitative survey design and the five dimensions of service quality tangibility, reliability, responsiveness, empathy and assurance were considered as variables for this study. Sample size of 13 banks. Structured questionnaire was used. Application of t-test was used to analyze data and was applied to all five dimensions.	Result of the study shows that the mean expectations of the five dimensions of service quality are higher than the mean perception thereby indicating that in general customers of both local and foreign banks are not satisfied with the service being offered by the banks. Recommendations was that a model to address this gap be developed.

Source: *Author (2018)*

2.3 Theoretical Review

The theoretical review identified definitions and descriptions of key terms and their relationship to organizational performance and operational excellence as well as detailed review of models of operational excellence. The researcher also reviewed literature that describes the barriers to achieving operational excellence.

2.3.1 Strategy and Strategic Management

A strategy is a well-defined plan driven by purpose and consists of policies, programmes, actions, decisions and resource allocations that define what an organization is, what it does, and why it does it (Bryson, 1995). It is in this manner, a deliberate selection of a different set of activities and actions to deliver a unique mix of value by and for an organisation. Therefore, it is the art and science of formulating, implementing, and evaluating, cross-functional decisions that enable an organization to achieve its objectives and maintain sustainable competitive advantage (David, 2005).

Strategic management inscribes a process of continuously relating the organisational objectives and resources to opportunities and threats in the environment. This implies that strategic management involves critically understanding the strategic position of the organisation, strategic choices for the future and turning strategies into action.

2.3.2 Organizational Performance

According to Richard, Devinney, George and Johnson (2009), organizational performance encompasses three specific areas of firm outcomes: (a) financial performance (profits, return on assets, return on investment); (b) product and market share performance (sales, market share and customer satisfaction); and (c) shareholder return (total shareholder return and economic value added).

Organisational performance is in this regard, the organization's ability to meet economic standards of profitability, market share (customers) and efficiency (processes) whilst enhancing shareholder value. The research therefore adopts this approach of the definition.

2.3.3 Operational Excellence

According to Breyfogle (2008), Operational Excellence (OE) strategy describes an operations model that creates a business management methodology that encourages process improvement and innovation. Operational Excellence is a component of organizational leadership and stresses usage of principles, systems, and tools that result in the sustainable improvement of Key Performance Metrics (KPMs).

Further, Rusev and Salonitis (2017) have defined Operational Excellence as a consequence of an enterprise-wide practice of ideal behaviours based on the correct principles and the right cultural adaptation focused on customer value addition or simply as a state where each and every employee can see and contributes to the flow of value to the customer, and fix that flow before it breaks down as a consequence of applying the right principles and behaviours.

There are many factors that can lead to operational excellence, including i) Leadership, ii) Management; iii) Human resource management practices; iv) Operations strategy, v) Organisational culture and vi) Organisational learning.

i) Leadership - There has been a volume of literature defining and describing leadership.

The definition has evolved over time and is applied specifically in context. However, a general definition as defined by Silva (2016, p.3) can be stated as “The process of interactive influence that occurs when, in a given context, some people accept someone as their leader to achieve common goals”. This definition espouses that;

- a) Firstly, leadership is a process and not just a personal quality. A process, according to the Oxford Dictionary, is “a series of actions or steps taken in order to produce something or achieve a particular result”.
- b) The leadership process is characterized by influence, more specifically, not only the influence of the leader upon followers, but the interactive influence between the leader and the followers.
- c) The leadership process occurs in a given context. Therefore, if the context changes the leadership process will also be different. Kellerman (2014) an authoritative on leadership studies supports this position and insists on the influence of the context in the leadership process.

- d) The leadership process requires common acceptance between the people, the followers, and their leader. The leader could be accepted because he or she makes use of force to exert influence upon followers (Kellerman, 2014). Conversely, followers may willingly accept, as suggested by Kotter (1988), because the followers perceive that the leader is the appropriate person to lead them in a particular context. Therefore, if the followers decide not to continue following their leader, the leadership process may end, as it happens in for example a presidential election where the incumbent loses to an opposing candidate.
- e) The leadership process must exist to accomplish shared goals between leader and followers as its primary purpose. As stated by Rost (1993), if followers perceive that the leadership is not acting on their behalf or in good faith, the leadership process may be affected resulting in unsatisfactory outcomes.
- ii) **Management** – According to an authority on management theory, Henri Fayol states that, management is to forecast and plan, to organise, to command, to co-ordinate and to control (Parker and Ritson 2005, pp175-194).
- a) **Plan:** A good plan of action should be flexible, continuous, relevant and accurate, as it unifies the organisation by focusing on the nature, priorities and condition of the business, longer-term predictions for the industry and economy, the intuitions of key thinkers, and strategic sector analyses from specialist staff groups.
- Further, for effective planning, managers should be skilled in the art of handling people, have considerable energy and a measure of moral courage, have some continuity of tenure, be competent in the specialised requirements of the business, and have general business experience and the ability to generate creative ideas.
- b) **Organise:** Organising is as much about lines of responsibility and authority as it is about communication flow and the use of resources. Fayol lays down the following organisation duties for managers:
- Ensure the plan is judiciously prepared and strictly carried out
 - See that human and material structures are consistent with objectives, resources and general operating policies
 - Set up a single guiding authority and establish lines of communication throughout the organisation
 - Harmonise activities and coordinate efforts, formulate clear distinct and precise decisions arranged for efficient personnel selection

- Define duties clearly
 - Encourage initiative and responsibility
 - Offer fair and suitable recompense for services rendered, make use of sanctions in cases of fault and error
 - Maintain discipline
 - Ensure that individual interests are subordinated to the general interest
 - Pay special attention to the authority of command
 - Supervise both material and human order
 - have everything under control
 - Prohibition against an excess of regulations, red tape and paperwork.
- c) **Coordinate:** this involves determining the timing and sequencing of activities so that they are properly in sync, allocating the appropriate proportions of resources, times and priority, and adapting means to ends.
- d) **Command:** Managers who have command should:
- Gain a thorough knowledge of their personnel
 - Eliminate the incompetent. Though this may be, the decision to separate with an employee should be the result of careful thought, that the employee should have had fairly assigned work for which (s)he was trained, that (s)he was fairly and objectively appraised and honest feedback was provided, that (s)he had been given every opportunity for additional training, offered guidance and that, where possible, (s)he was re-assigned to alternative work. This also includes procedures involving written warnings and protection against bias and inequities.
 - Be well versed in the agreements between the business and its employees
 - Set a good example
 - Conduct periodic audits of the organisation
 - Bring together senior assistants to ensure unity of direction and focus of efforts not become engrossed in detail
 - Aim at making energy, initiative, loyalty and unity prevail amongst staff
- e) **Control:** This implies checking that everything occurs according to the plan adopted, the principles established and the instructions issued and taking appropriate corrective action. Control also involves periodically checking for

weaknesses, errors and deviations from the plan as well as maintaining an up to date plan that adapts to the organisation's changing environmental developments.

Therefore, leadership is a job to inspire, motivate and influence whilst management focuses on planning, organisation and coordination to achieve desired results (Sharma and Jain, 2013).

iii) Human Resource Management Practices - Human Resource Management (HRM) is defined as a system of activities and strategies that focus on successfully managing employees at all levels of an organization to achieve organizational goals (Byars & Rue, 2006). Operational excellence cannot occur without human interactions, effectiveness and capabilities. Essentially, the purpose of HRM is to maximize the productivity of an organization by optimizing the effectiveness of its employees. Therefore, successful implementation of these activities or practices is an important aspect for achieving operational excellence.

iv) Operations Strategy – an operations strategy is a deliberate plan of action based on a pattern of decisions which shape the long-term capabilities of any type of operation and their contribution to the organisation-wide strategy, through the reconciliation of market requirements with operations resources (Slack and Lewis, 2011). Therefore, an operations strategy is implemented by a firm to dictate what and how they will employ their resources in the production of products or services. An operations strategy is a necessary element for a business to achieve operational excellence as it is the overarching framework that operational excellence is built on. It also supports and aligns to the overall firm's corporate strategy. Strategy in a business organization is essentially about how the organization seeks to survive and prosper within its environment over the long-term (Slack, Chambers & Johnson, 2004). Thus it deals directly with organisational performance. Therefore, the operations strategy has a direct impact on the basis on which an organization is able to sustain itself in the long run. Further, the way in which an organization secures, deploys and utilizes its resources will determine the extent to which it can successfully pursue specific performance objectives. Slack et al. (2004) argue that there are five operations performance objectives:

a) **Cost:** The ability to produce at low cost.

- b) **Quality:** The ability to produce in accordance with specification and without error.
- c) **Speed:** The ability to do things quickly in response to customer demands and thereby offer short lead times between when a customer orders a product or service and when they receive it.
- d) **Dependability:** The ability to deliver products and services in accordance with promises made to customers (e.g. in a quotation or other published information).
- e) **Flexibility:** The ability to change and alter operations as required to meet demand.

Flexibility can comprise up to four aspects:

- The ability to change the volume of production.
- The ability to change the time taken to produce.
- The ability to change the mix of different products or services produced.
- The ability to innovate and introduce new products and services.

Excelling at one or more of these operations performance objectives can enable an organization to pursue a business strategy based on a corresponding competitive factor (Slack and Lewis, 2011). The operations performance objective and its corresponding competitive factor are illustrated in Table 2.2 below - Operations Excellence and Competitive Factors.

Table 2.2: Operations Excellence and Competitive Factors.

Operations Performance Objective	Competitive Factor
Cost	Low price
Quality	High quality
Speed	Fast delivery
Dependability	Reliable delivery
Flexibility	Frequent new products/services Wide range of products/services Changing the volume of product/service deliveries Changing the timing of product/service deliveries

Source: http://cws.cengage.co.uk/barnes/students/sample_ch/ch2.pdf

Slack et al (2011) further states that it is important to note that the success of any particular business strategy depends not only on the ability of operations to achieve

excellence in the appropriate performance objectives, but crucially on customers valuing the chosen competitive factors on which the business strategy is based. Therefore, there needs to be a clear correlated approach to matching operations excellence to customer requirements and this must be at the core of any operations-based strategy.

- v) **Organisational Culture** – the American Heritage English Dictionary definition of culture is: “The totality of socially transmitted behaviour patterns, arts, beliefs, institutions, and all other products of human work and thought.”

According to Schein (2004), culture involves three basic human activities; what people think, what people do, and what people create. Schein (2004) further states that, several common properties of organisational culture arise; i.e., culture is shared, learned, transmitted cross-generationally, symbolic, adaptive, and integrated.

Furthermore, Peters and Waterman (2006) espouse the theory of organizational excellence. Their theory maintains that the culture that an organization adopts is directly linked to its success. Therefore, successful companies are characterized by cultural practices which put emphasis on action, customer-centricity, innovation, productivity, value-based effort, simplicity in what they do, and economic and efficient utilization of resources. This implies that organizations are likely to stay in businesses if their cultural values provide for a platform to continuously strive for operational excellence.

Therefore, it can be said that an organisation must embody an applied approach to organisational culture as there must exist valid organisational assumptions, a set of shared beliefs and values, a way of thinking and an adaptive behaviour influenced by environmental changes and competitive forces that lead to operational excellence.

- vi) **Organisational Learning** – Organisational Learning is the gaining of new knowledge, and the ability to apply that new knowledge in order to improve performance. Furthermore, Organisational Learning is described as a process of developing, retaining, and transferring knowledge within an organization. Knowledge is acquired through experience, training and continuous assessment, monitoring and control (Argyris & Schon, 1978).

Therefore, it can be stated that organisational learning is key to achieving operational excellence through the process of continual detective and corrective measures that result in performance improvement. In addition, literature on operational excellence postulates the fact that it is considered as a competitive weapon for firms, both in service and manufacturing. It is therefore imperative that firms carefully contemplate on their operations strategy decisions regarding learning due to the high impact that results may have on organisational performance.

Further, Breyfogle (2008), states that much of the operational excellence management philosophy is based on continuous improvement methodologies such as Six Sigma, Lean, and Scientific management. The problem that often occurs with these deployments is that improvement efforts occur in silos so that the enterprise as a whole does not fully benefit.

It is evident that operational excellence has become a pivotal component for organisations to improve performance. It is described as a philosophy implemented within and around an organisation where problem-solving, teamwork, and leadership results in the on-going improvement and innovation development of an organization. This theme and process involves proactively focusing on and meeting the customers' needs and benefits, keeping the employees positively motivated, engaged and empowered, and continually improving the value-add and business compliance activities within and around the organisation whilst minimising or eliminating operations waste (Mitchell, 2015).

However, Neilson-Baxter (2015) states that the focus of Operational Excellence should go beyond a traditional short-term view but must be built for improvement of a long-term organizational transformation. In support, Duggan (2011), states that the defined model for achieving operations excellence must create a system for obtaining positive impact organisational transformation that achieves improved organisational performance by considering ten key factors in its methodology:

- i. Support for predictive reporting on Key Performance Indicators (KPIs) such as capacity, closure rate, quality, and system-up times in a format so that the most

appropriate action or non-action occurs in this operational excellence strategy model.

- ii.** Incorporates a process improvement methodology so that there are defined projects that are created where the enterprise as a whole benefit, upon completion of the enhancement effort.
- iii.** Provides process metric reporting that encourages localized process improvement work in this operational excellence strategy model.
- iv.** Offers accessibility to process documentation and standard operating procedures that impact the performance metrics; e.g., through a click of a mouse button in an organizational value chain.
- v.** Incorporates analytically/innovatively determined strategies within the overall system of this operational excellence strategy model.
- vi.** Integrates change control in the overall operational excellence strategy model methodology.
- vii.** Provides a system for deliberate orchestration of change management efforts.
- viii.** Incorporates metric ownership assignability in the overall operational excellence strategy model.
- ix.** Provides a system where a huge amount of information can be broken down to bite-size-pieces so that appropriate actions or non-actions can be taken in this operational excellence strategy model.
- x.** Contains a process control mechanism that includes descriptive action plans when special-cause issues occur.

The literature on the subject matter of operational excellence improving the bottom line reveals that the findings remain inconclusive in that the sole investment in optimising operations without the consideration of the soft variables is not necessarily improving performance as the investment might be wasted (Mooney, Gurbaxani & Kraemer, 1996). The basic concept behind these findings is that operational excellence is not an isolated aspect within the organization and that only those organisations that can successfully integrate and apply technologies that support into their business processes and address customer's existing and future needs innovatively will be able to reap sustainable benefits of performance and profitability (Strassmann, 1997).

To this regard, there is an identifiable need of core competencies in operational excellence. Prahalad and Hamel (1990) state that core competencies are developed through the process of continuous improvements over the period of time rather than a single large change. For organisational performance improvement to succeed, it is important and required to build core competencies as drivers for operational excellence.

Therefore, in retrospect, an innovative integrative operational excellence strategy overcomes issues that commonly occur with traditional organizational deployments of operational excellence and process improvement by allowing for a more strategic viewpoint across the board.

2.3.4 Relationship between Operational Excellence and Innovation

According to the Organization for Economic Cooperation and Development (1981), the definition of innovation can be stated as:

Innovation consists of all those scientific, technical, commercial and financial steps necessary for the successful development and marketing of new or improved manufactured products, the commercial use of new or improved processes or equipment or the introduction of a new approach to a social service. R&D is only one of these steps (p.15).

The European Union in its Green Paper defines innovation as:

The renewal and enlargement of the range of products and services and the associated markets; the establishment of new methods of production, supply and distribution; and the introduction of changes in management, work organization, and the working conditions and skills of the workforce (1995, p.2)

Therefore, from the definitions it is apparent that innovation in operational excellence and its management have three dimensions (Neely and Hii, 1998). These dimensions are:

- i. Product** – innovations focused on product performance enhancement, quality and features or new product design and development process.

- ii. **Process** – process reengineering and optimisation; new process development and production methods for products and services.
- iii. **Organisational** – Organisational change in operational model. It is innovation that introduces changes in management, work organisation, and the working conditions and skills of the workforce.

Generally, there are two types of innovation in operations excellence that are applicable to the three dimensions stated above namely; i) Radical – which follows a breakthrough radical change approach and ii) Incremental – which is a progressive elaboration and improvement approach. These are complementary in an operational excellence strategy implementation whereby it provides the platform for both to be achieved effectively. Table 2.3 below illustrates the type and dimension of innovation in operational excellence.

Table 2.3: Types and Dimensions of Innovation in Operational Excellence

Innovation Dimensions	Innovation Types	
	Incremental	Radical
Product	32-bit chips to replace 16-bit chips	Launch of an iPod
Process	Upgrading quality inspection system	Product prototyping on a computer
Organisation	Implementation of quality circles	Videoconference meeting

Source: (Neely and Hii 1998, p.9)

Innovation Capacity

The term innovative capacity postulates the ability of the organisation to generate innovations. It is the intrinsic ability of a firm to recognise and learn the value of new internal and external information, assimilate it and apply it to commercial ends (Higgins (1995).

Studies by Neely and Hii (1998) suggest that for an organisation, innovative capacity is influenced by four factors; i) Organisational culture; ii) Leadership; iii) Internal processes; and iv) External environment.

i) Organisational Culture

A clear sense of mission and purpose is common among innovative companies. Their strategy is well thought out and clearly articulated. Innovation in terms of operations is a coherent part of their strategy. These organisations hinge on a business philosophy of continuous improvement driven by depth in customer satisfaction and total quality management to achieve operational excellence. The culture supports strategy by enabling an open, multi-functional and multi-level team-based working approach towards project and problem-solving. Employees are empowered from the lowest levels.

ii) Leadership

With regards to leadership, the chief executive demonstrates a personal commitment to innovation. He or she possesses vision and enthusiasm and encourages risk-taking and high impact change to operations at all time. There also exists constant communications with customers, collaboration with suppliers, investors and employees as the norm.

Further, the organisational structure is flatter in general. The environment is one of openness and a deliberate feedback process is instituted to solicit constantly, valuable information from the stakeholders.

iii) Internal Processes - Idea Generation and Capture.

There is a constant generation of and capture of new ideas. Employee suggestion schemes are instituted as a mechanism for capturing internal ideas. Successful ideas are rewarded and failure is regarded as part of the learning process. Externally, through interactions with customers, competitors and suppliers, these organisations look for potential source of ideas. Contacts between research and development, design and production, sales and marketing and customers are encouraged.

Other aspects of internal processes include:

- a) Performance measures** - companies constantly review their progress by measuring against milestones set. Clear targets are set in the areas of customer satisfaction, sales values, market share, product development cycle times, number of new products introduced and the quality of products introduced.

- b) Training** - both soft and hard skills-sets of staff at all levels are crucial to the ability to transform into a truly operationally optimised organisation. This is achieved through fostering continuous training and development programmes for staff at all levels of the organisation.
- iv) External environment - Customers, competitors, suppliers and government.**
- a) Customer-driven** - All operational excellence activities must have in mind that customer satisfaction is their key performance driver. They tend to be more focused around a proactive approach towards customers. They know their markets and benchmark performance against competitors and the world's best regardless of functions.
- b) Strategic partners** - Developing strong supplier relationship and active involvement in partnership sourcing, collaboration with other companies and academia to maximise knowledge and minimise risk.
- c) Investors/Shareholders** - Operational excellence by virtual of efficient and effective utilisation of resources, maximise shareholder value. Investors play a crucial role in the transformative process. These organisations establish effective communications with investors informing about their innovative activities and ensuring confidence and long-term relationships with investors.
- d) Government** - Regulation is source of motivation for operational excellence. Organisations of this nature tend to regard regulation (not over-regulation) in a positive manner. They are aware of proposals for legislation which might affect them and participate in standard-setting and influence regulatory procedures. In retrospect, these organisations tend to work in partnership with the government.

Figure 2.1 illustrates the dimensions of innovation capacity inherent in innovative organisations.

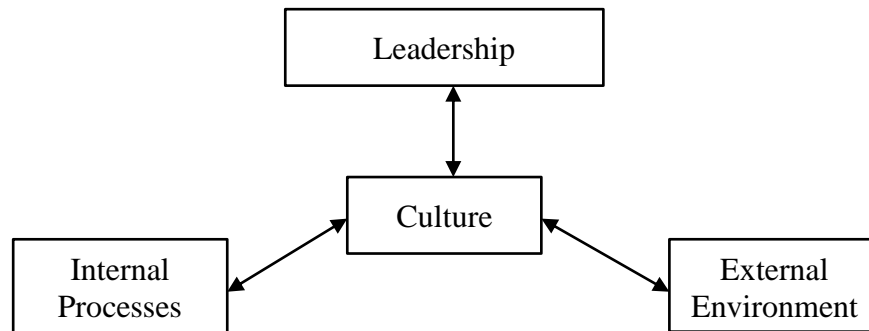


Figure 2.1: Dimensions of Innovative Capacity

Source: (Neely and Hii 1998, p.24)

Innovativeness of Operational Excellence

Neely and Hii (1998) describe the concept of innovativeness in relation to the propensity of an organisation to innovate relative to its industry. That is to say the more an organisation's rate to innovate is above industry average then it has a higher innovativeness compared to competitors. Operational excellence once implemented systematically provides the platform to innovativeness as in itself being an innovation. Neely and Hii (1998) identify three sets of factors that influence firm innovativeness; i) Organisational characteristics; ii) Managerial characteristics and iii) Environmental characteristics which are also the factors dominant in operational excellence.

- i) **Organisational characteristics** – these characteristics include
 - Size of organisation in relation to its industry
 - Interconnectedness of its functional units/departments
 - Centralisation/decentralisation of decision-making
 - Organisational culture
- ii) **Managerial characteristics** – these are characteristics at the individual leadership level
 - Attitude toward change
 - Attitude toward improving performance
 - Ability to think critically
 - Ability to influence right behaviours for the organisation's overall benefit

- iii) Environmental characteristics** - these are characteristics external to the organisation but impact the organisation's innovativeness and innovative capacity.
- Regulatory and compliance requirements
 - Government legislation in support and adoption to new and improved methods of production and service delivery
 - Government legislation on protection of intellectual property
 - Competitor innovativeness
 - Customer/client rate of adoption of innovations

Operational Excellence through Diffusion of Innovation (DOI)

This is described as the manner in which innovation is spread across a market and/or non-market channels. (OECD, 1992). Diffusion of innovation (DOI) was first coined by Rodgers, (1985), though it was not intended for operation excellence research, it has been used to provide explanation for the adoption of innovations in operations (Mohan, 2014). According to Mohan, (2014), DOI suggests that when consumers and users perceive the innovation to have a greater relative advantage, observability, trialability and compatibility, the rate of technology adoption will increase. Without diffusion an innovation will have no impact on the market or society at large. Diffusion is characterised by the innovation itself, the population of potential adopters, their decision-making process and the flow of information concerning the innovation between the manufacturers and the adopters. Operational excellence requires this inextricably in order to foster transformation of operations brought about by new technology and/or reengineered processes in a format that yields organisational change.

2.3.5 Barriers to Operational Excellence

Given the significance of operational excellence, the literature reviewed from a report by the OECD (1992:38) suggests there are many barriers and that these are both internal and external to an organisation. According to the report, the external barriers include the i) lack of infrastructure, ii) inadequate technologies, iii) deficiencies in education and training systems and iv) inappropriate or lack of government policy. Internal barriers include; i) rigid organisational arrangements and procedures, ii) hierarchical and formal communication structures, iii) conservatism and conformity, iv) lack of vision, v)

resistance to change, vi) lack of motivation, vii) risk-avoiding attitudes and viii) overall neglect and misuse of talents within the organisation.

Factors perceived as restrictive to product/process innovation include; i) fear of imitation, ii) high costs of innovation, iii) insufficient government support, iv) lack of information, v) lack of qualified personnel, vi) no market or insufficient knowledge about markets, and vii) shortage of support/infrastructure in the region.

2.3.6 Models of Operational Excellence

Models of operational excellence are tools and techniques applied within and around organisations to achieve stellar operations that yield targeted improvement, effectiveness and efficiency in one or more key performance factors. These factors being though not exhaustive; cost, flexibility of production or services, new product and innovations, leadership in quality and agility in delivery. Below are the models reviewed.

(a) Shingo Model

The Shingo model of operational excellence asserts that successful organisational transformation occurs when leaders understand and take personal responsibility for architecting a deep and abiding culture of continuous improvement. The Shingo model espouses two underlying factors – values and principles. Values are cultural, personal, interpretable and variable. Values influence how people see the world and ultimately dictate the choices for how people behave. Principles govern the outcomes of the choices. In other words, the values of an unprincipled person will very likely lead to behaviours that have negative consequences. It is based on 10 universally accepted Guiding Principles. Each principle plays a critical role in enabling an organization's culture, designing systems for continuous improvement, aligning principles, behaviours and results across the enterprise, and achieving a sustainable culture of operational excellence (Miller, 2012). Covey (1989) describes principles as fundamental truths. Covey further states that a principle is a natural law that is universally understood, timeless in its meaning and fundamentally inarguable because it is self-evidenced. At the basic level, it is values that govern actions but principles govern the consequence of our actions.

Plenert (2017) an authority of the Shingo model, postulates operational excellence as a consequence of an enterprise-wide practice of ideal behaviours based on the correct

principles or simply as a state where each and every employee can see the flow of value to the customer, and fix that flow before it breaks down. It is therefore the correct principles categorized under four dimensions; i) Cultural Enablers, ii) Continuous Process Improvement, iii) Enterprise Alignment and iv) Results that are pertinent to achieving operational excellence.

Further, Plenert (2017) states that to achieve operational excellence, not only do organizations have to implement the correct principles, the principles have to also be deeply embedded within the organizations culture. Understanding the principles behind the tools leads to higher-order thinking. Therefore, the culture of excellence must ensure that everyone within the organization knows the ‘why’ behind the ‘how’ and the ‘what’ the organisation requires achieved.

According to an assessment framework designed for operational excellence by Rusev and Saloniitis (2017) the Shingo model is a categorization of the guiding principles of operational excellence described by Plenert (2017). Associated with each category is a list of important supporting concepts. The principles are categorized into four dimensions: i) Cultural enablers, ii) Continuous process improvement, iii) Enterprise alignment and iv) Results – the ultimate end of all business initiatives. These four dimensions overlay five core business systems: product/service development, customer relations, operations, supply as well as management and administrative support systems. Figure 2.2 below illustrates the Shingo model.

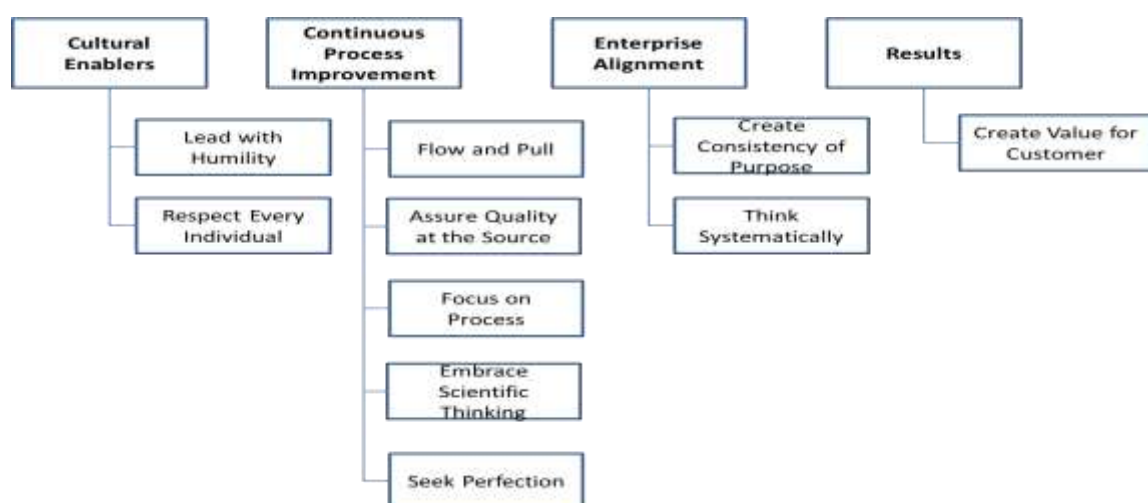


Figure 2.2: Shingo Model - Dimensions and the Underlying Principles

Source: (Rusev and Saloniitis 2017, p.273)

(b) Lean Six Sigma Operational Excellence Model

The Lean Six Sigma Operational Excellence model is based on two distinct business management strategies which allow an organisation to effectively address issues of speed, quality and cost in its operations. Lean Six Sigma is thus a synergized managerial concept of Lean and Six Sigma (Michael, 2002).

The proponents of this model espouse that it drives up customer satisfaction and bottom-line results by reducing variation, waste, and cycle time, while promoting the use of work standardisation and flow, thereby creating a competitive advantage.

This model - Lean Six Sigma, is a methodology that relies on a collaborative team effort to improve performance by systematically removing waste and reducing variation in operations. Therefore, it is stated that Six Sigma seeks to improve the quality of process outputs by identifying and removing the causes of defects (errors) and minimizing variability in business processes. Synergistically, Lean aims to achieve continuous flow by tightening the linkages between process steps while Six Sigma focuses on reducing process variation (in all its forms) for the process steps thereby enabling a tightening of those linkages.

Furthermore, according to Shanmuganathan (2010) embedding a rigorous methodology such as lean six sigma into organizational culture is not a short-term process but rather a journey that requires a deep commitment not only to near-term results but also long-term, continuous, even break-through results. Therefore, senior management level leadership and commitment is a key factor.

The eight kinds of waste (muda) which it focuses on reducing are:

- i. **Defects** - Defects are usually due to inspection and rework of defective material in inventory. Some causes of defects include, weak process capability, poor quality controls and poor process documentation and flawed process designs.
- ii. **Over-Production** - Overproduction is making more than is required by the customer, making earlier than is required by the customer and making product the customer does not want. This is a major flaw that occurs unknowingly with most manufacturers. This waste can tie up significant working capital resources that can

be used for other business operations. Some key causes of overproduction are misuse of automation, unclear customer needs and inability to accurately forecast demand.

- iii. **Waiting** - This waste is idle time that is created when waiting for materials, equipment, product and marketing activities. Some key causes of waiting waste are unbalanced workload, unplanned downtime, excessive set-up times and poor supplier deliveries.
- iv. **Non-Utilized Talent (Talent wastage)** - This is the waste of not using people's mental, creative, and physical abilities and is mainly caused by lack of teamwork, lack of adequate training, poor communications and also, misaligned process flows.
- v. **Transportation** - This is the waste incurred by transporting parts and materials around the plant facility. This is caused by poor plant layout, misaligned process flows and not producing to a forecast demand
- vi. **Inventory** - This waste occurs when there is supply in excess of real customer demand. This waste masks real production. The causes of excess inventory are mainly due to production buffers, unreliable suppliers, excessive queue times and unbalanced workloads.
- vii. **Motion** - Motion waste is any movement of people or machines that does not add value to the product or service. It is caused by poor layout, unplanned downtime, unorganized workplace and inadequate process controls.
- viii. **Extra-Processing** - These are non-value-add activities within the process caused by poor process control, poor document control system, redundant approvals and misunderstood customer needs.

By understanding these wastes an organization can begin to create an environment which allows the organisation to supply products paced by the demand of their customers with as little waste as possible. This system wide approach will shift a company from maximizing utilization and productivity to maximizing material flow and elimination of waste, ultimately increasing operating results and true profitability

As stated, Lean Six Sigma is a combination of Lean and Six Sigma principles. It applies to the lean methodology of removing waste the DMAIC phases. This is an abbreviation of Define, Measure, Analyse, Improve and Control.

1. Define

The purpose of this step is to clearly articulate the business problem, goal, potential resources, project scope and high-level project timeline

2. Measure

This is a data collection step. The purpose of this phase is to objectively establish current performance baselines as the basis for improvement. The performance metric baseline(s) from the Measure phase will be compared to the performance metric at the conclusion of the project to determine objectively whether significant improvement has been made. Critical to this phase is defining and deciding on what should be measured and how to measure it.

3. Analyse

The purpose of this step is to identify, validate and select root cause of the problems for elimination. It involves i) Listing and prioritize potential causes of the problem, ii) Prioritizing the root causes (key process inputs) to pursue in the Improve step and iii) Identifying how the process inputs affect the process outputs and what might be contributing to the occurrence.

4. Improve

The purpose of this step is to identify, test and implement a solution to the problem; in part or in whole. It involves brainstorming sessions to come up with practical solutions to the problem,

5. Control

The purpose of this step is to sustain the gains by developing and applying a control plan.

(c) European Foundation for Quality Management Excellence Model

The European Foundation for Quality Management (EFQM) Excellence Model is largely based on the concepts of the Total Quality management (TQM), which considers that all

stakeholders share the benefits and applies different weightings applied to each of the stakeholder groups (Dotun, 2001; Oakland and Tanner, 2008).

The EFQM Model allows employees to understand the cause and effect relationships between what their organisations do and the outcomes/results achieved. It is built on 8 fundamental rules (EFQM, 2012):

- 1- Adding value to the customers
- 2- Creating sustainable future
- 3- Developing organizational capacity
- 4- Harnessing creativity and innovation
- 5- Leading with vision, inspiration and integrity
- 6- Managing with agility
- 7- Succeeding through talented people
- 8- Sustained outstanding results.

Figure 2.3 below illustrates the model.

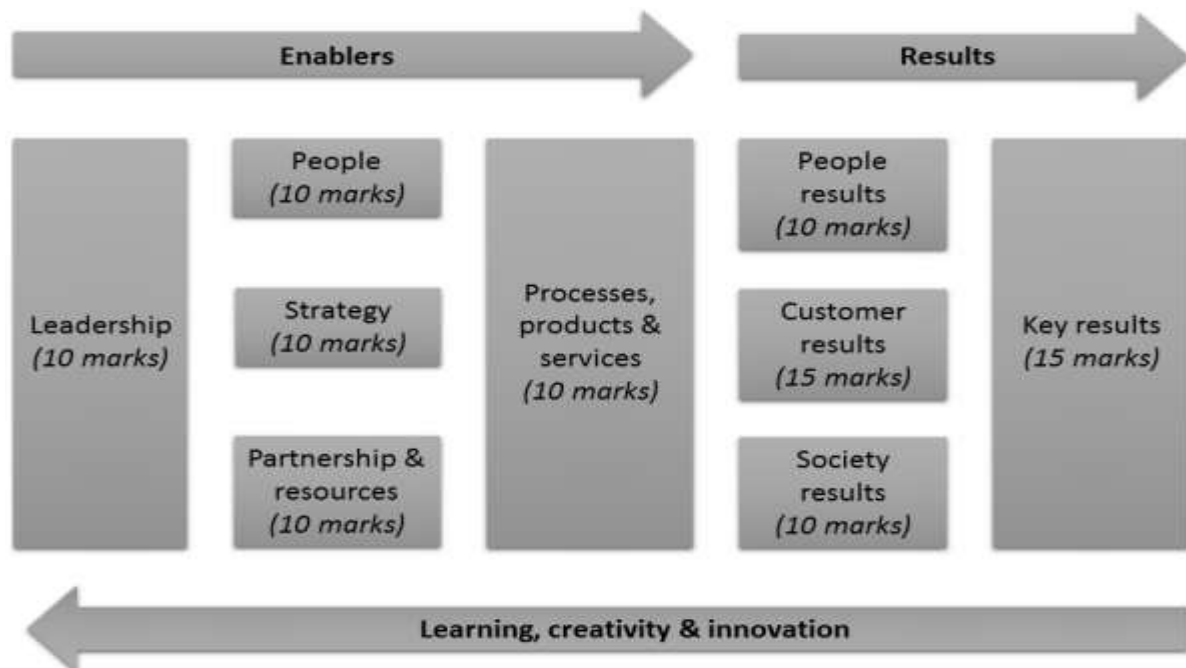


Figure 2.3: EFQM Excellence Model

Source: (EFQM 2013, p.4)

The shortfall of the EFQM excellence model applied to review organisations' excellence is that the scoring criteria are defined too generally due to the need to be applicable to a very wide range of different industrial sectors. As a consequence, the self-assessment

criterion needs to be adjusted to fit to Zambia's commercial banks specific requirements and adopt any industry-specific language. Further, it can be noted that the interpretation, definition, implementation and measurement of operations excellence as well as the impact to organizational performance excellence is too abstract in this approach.

(d) Operational Excellence Model in Financial Services Organizations

According to Noble (2008), an Operational Excellence framework in Financial Services Organizations provides the means by which an institution manages by process. This implies that the organisation manages itself around and within processes in the same way as it may manage itself around customers, products and markets. The processes which are core to the business are identified and directly managed to ensure that each process is owned, controlled and run as a business serving its stakeholders.

The framework espoused by Noble (2008) is comprised of three key components which establish that processes require principles, practices and procedures in the areas of i) Leadership ii) Knowledge and iii) Execution to achieve operational excellence in a bank.

- i. **Process Leadership** - establishes processes as an organization imperative with specified objectives, strategies, tactics and accountabilities assigned within the leadership of the organization.
- ii. **Process Knowledge** - provides the organization with the framework, skills and management systems with which to manage business assets on an ongoing basis.
- iii. **Process Execution** - delivers the mechanisms and the organization culture through which the organization effects day-to-day and continual improvement in a consistent and controlled, but also rapid and sustainable basis.

Noble (2008) goes ahead to state that the adoption of such a framework by financial services companies is designed to instil a deeper culture of excellence and a common discipline of process management across the organization, all of which are targeted to drive greater consistency in customer experience, as well as in operating efficiency and effectiveness, and in the management of risk.

Table 2.4 below outlines the nine specific critical elements that are needed in a financial institution to achieve operational excellence according to Noble (2008).

Table 2.4: Operational Excellence Framework for Financial Institutions

Process Leadership	Process Knowledge	Process Execution
<p>Vision A vision for each end-to-end business process align to the business strategy</p> <p>Define end state performance levels - Cost; Risk, Speed; Accuracy</p>	<p>Architecture Understanding of each end-to-end business process and how they all fit together</p> <p>Defined business process end-to-end linkages</p>	<p>Culture A culture that enables operational excellence to thrive</p> <p>Customer-centric, employee empowerment & continuous improvement</p>
<p>Ownership A Senior Management individual responsible for each end-to-end business process</p>	<p>Measurement End-to-end customer-oriented process measurements</p> <p>Aligned to Voice of Customer (VOC)</p>	<p>Governance Designed & build-in end-to-end business process governance</p> <p>Change management controls in business process management</p>
<p>Implementation Plan Well thought out plan to implement the operational excellence vision</p> <p>Agreed timeframe for implementation</p> <p>Continuous alignment & review</p>	<p>Capabilities In possession of resources, skills, tools to achieve operational excellence</p> <p>Recognition & remuneration aligned approach</p>	<p>Transformation & Improvement Application of state-of -the-art tools, techniques and methods to innovate and reengineer business process to achieve radical and continuous improvement to business processes</p>

Source: (Noble 2008, p.8)

Implementation of the Operational Excellence framework in Banking necessitates that the core components of the framework adopt an industry best practices approach in order to address each of the nine critical elements proven consistently to deliver excellence through structured process management disciplines (Noble 2008). Furthermore, key design principles of this framework are that it applies common minimum standards across each of the perquisite components with intent to deliver group-wide business results, and that it allows a degree of flexibility and customization in its application to accommodate the existing operating models of various financial institutions.

Noble (2008) further outlines that a full implementation, preceded by a controlled pilot implementation in one business area to ensure that the framework is completely fit for the organization, requires a significant behavioural change across the entire organization in order to achieve the desired results of organisational performance enhancement, and as such, would require buy-in and support at senior level of management.

Institutions that have successfully implement this type of framework stay ahead in their industry through consistent execution and thus exhibit the characteristics of an excellence-focused company which include: i) A clear market leader, ii) A culture of genuine customer focus, iii) An organization designed around business-critical processes, iv) A scalable platform for growth, vi) A single but flexible company-wide approach, vii) Best people empowered with the challenge of changing the business and viii) Managing by data – not by gut feeling.

(e) Kobayashi 20 Keys of Workplace Improvement Model

The Kobayashi 20 Keys approach offers a way to look at the strength of an organisation and to systemically improve it, one step at a time by focusing on 20 different but interrelated aspects (Kobayashi, 1995).

Kobayashi further states that the 20 keys methodology is based on Toyota production system and was developed in Japan in the 1980s. This methodology of improving operations in an organisation enables easier accomplishment of the organisation's strategic goals by development of human and organizational potentials and is an excellent start for the reorganization of the entire company. The Kobayashi 20 keys methodology is in fact, a company-wide process of focused and measured continuous incremental innovation that leads to a culture of sustained improvement and elimination of waste in all systems and processes (Bicheno, 2004).

The name comes from 20 tools and different techniques which can be used in different situations and areas in the company. The keys are an agglomerate of different tools and techniques which are already well known in the world, but they are incorporated into a common system of evaluation, visual reporting, monitoring of results, and work organization (Dabić, Orac, Tugrul, 2016: 4). The methodology as discussed encompasses the entire company - all employees at all levels - and is focused on constant improvement

and innovation. It is thus an integrated approach to achieving an organisation's strategic goals, covering all areas of business as prescribed in the balanced scorecard – financial, people, process and operations as well as customers.

The Kobayashi 20 keys methodology as a system also encourages synergic effects within different business areas, successful and long-lasting improvements in business operations and can be an excellent introduction to lean thinking (Kobayashi, 1995). One of the goals of the 20 keys is to eliminate all the unnecessary actions. This implies to simply enable an organisation serve to direct and manage its core ability around and about quality, delivery times and costs. Primorac, (2005) supports this by stating that using this method leads to increased productivity, quality enhancement, cost reduction, increased flexibility and adaptability to market changes, increased customer satisfaction as well as suppliers, focus on efforts to improve, grow in innovation, and ultimately leads to increased profits.

According to studies carried out by Gider (2004), it has been established that although from the keys' names it may look like this methodology is intended only for manufacturing companies, experiences from different countries are showing that this methodology is effective also in different service companies with a small adaptation of several keys. It is important to state that although 20 keys methodology is accepted worldwide there are not a lot of research papers covering the influence of the methodology on the company efficiency or competitiveness in the market (Dabić, Orac, Tugrul, 2016).

To further enhance the effectiveness of the 20 keys, Kobayashi (1995) developed what is now known as Practical Program of Revolutions in Factories (PPORF) as a result of his work with companies in their pursuit of improvement. The basic principles of implementation program of PPORF are presented in his 20 keys relations diagram where all the keys are presented together with their relationship. Every tool (key) of this methodology is contributing to the main long-term goal which is a significant profit. The main consideration of every key is continuous improvement and accomplishment of the company's goals and due to methods' completeness can be considered as a quality management model.

Bastleer (2011) stated four basic keys which are the building blocks of the methodology:

- Key 1 - cleaning and organizing - everything starts with order and cleanliness

- Key 2 - rationalizing the system/management of objectives - set goals and ensure that everybody in the company knows what his/her responsibility is to achieve these goals
- Key 3 - improvement of team activities - provide a culture within which team activities can be set up to organize the improvements
- Key 20 - leading technology/site technology - everything stands and falls with the speed at which an organization can successfully adopt new technology.

Bastleer (2011) further states that there are 4 keys linked to the characteristics that make a production system excellent, that is to state a better, faster and cheaper system. These keys are –Key 11 (quality assurance system), Key 6 (manufacturing value analysis) and Key 19 (conserving energy and materials) and Key 4 (reducing inventory). Thus the main areas the 20 keys are focused on can be divided into five groups as indicated in the Table 2.5 below.

Table 2.5: Main Categories of Keys

Group	The main goal of the keys group	Keys
Costs	Reduction of costs	Key 6 - Operations Kaizen Key 13 - Waste eliminating Key 14 - Employees empowerment to make improvements Key 17- Control of efficiency Key 19 - Energy and material conserving
Delivery	Improving the process flow/reduction of stock / faster delivery	Key 5 - Quick changeover technologies Key 4 - Lowering work-in-process (WIP) Key8-Coupled manufacturing/production Key 16 - Scheduling of the production
Motivation and Security	Workplace energizing	Key 1 - Cleaning and organizing to facilitate work Key 2 - Alignment of goals and rationalization of the system Key 3 - Activities in small groups

		Key 10 - Discipline at workplace
Quality	Quality Improvement	Key 7 - Zero monitor manufacturing/ production Key 9 - Machinery and equipment maintenance Key 11 - Assurance of the quality Key 12 - Development of suppliers Key 15 - Skill versatility and cross- training
Technology	Development of Technology	Key 18 - Information systems use Key 20 - Leading technology/site technology

Source: (Bastleer, 2011, p.18)

It is imperative that for an organisation that has a strategic directive to achieve continuous improvement and to keep the long-term business success, all previously stated keys should be implemented. However, in practice, most of the companies that are using the Kobayashi 20 keys methodology don't introduce all keys at once.

The system includes simple evaluation schemes and steps to gradually increase ratings across all 20 key business areas. The 20 keys methodology enables every employee at all company levels to be part of their own company benchmarking. The methodology acts as an enabler for reaching constant improvement goals and simultaneously focuses on organizational climate for employees' initiative and motivation. Main benefits of implementing 20 keys methodology are enhancing competitiveness, market share, customer satisfaction and profitability (Kobayashi, 1995; Dabić, Orac, & Tugrul, 2016).

Another key feature of the Kobayashi 20 keys approach is the benchmarking system it describes. The benchmarking system is an important part of the 20 Keys philosophy in measuring organisational strength. Benchmarking is defined as the continuous process of measuring an organisation's products, services and operations against the highest industry ranked competitors or those companies recognised as industry leaders. In addition, it includes the search for the best industry practices that will lead to superior performance (Gregoire and Delaney, 1992).

Benchmarking is applied to the methodology as an evaluation of the success rate and this has been one of the main rationale as to why the concept has gained acceptance in many organizations that have implemented it (Dabić et al., 2016).

The process of benchmarking often involves the following steps:

- (i) Knowledge of the organisation's operations. This focuses on the detailed analysis of the strengths and weaknesses of the organisation that intends to set benchmarks
- (ii) Analysis of the business environment by researching on competitors and substitutes. It is also, important to know what companies in other industries are doing - some useful ideas and techniques may be adopted.
- (iii) Defining and establishing key performance targets based on the knowledge gained through the analysis.
- (iv) Setting plans and directing organisational efforts on the established best operating characteristics as defined.

Therefore, benchmarking is a tool to identify, establish and achieve standards of operational excellence that are based on the realities of the competitor landscape by evaluating and comparing companies from different countries and industries (Gider, 2004). It thus has an external focus to becoming competitive and often this will provide breakthrough thinking that will lead to non-linear improvements in performance but limits innovations to improving operations to what the industry can offer. Therefore, if an organisation built its operational excellence strategy on benchmarking and did not fully understand the key aspects as to why the competitors do certain things which the benchmarking organisation does not have the capability, competency or resources, then the risk of failure of the adopted operational excellence strategy is high for the benchmarking organisation. Table 2.5 below illustrates an implementation of the Kobayashi 20 keys model.

Historically, this methodology which initially was most widely spread in Japan, from where it originated, has expanded in Europe during the last decade. With adaptations to European culture, it was introduced into German, Dutch, British, and Spanish companies. With this indication there is very little evidence that it has been applied in Africa with special reference to Zambia.

Table 2.6 below describes the 20 keys with the main activities involved at each stage of implementation for each of the 20 keys.

Table 2.6: Kobayashi 20 Keys - Implementation

Key No.	Key Description	Stage 1	Stage 2	Stage 3	Stage 4	Stage 5
1	Cleaning & Organizing	Untidy. Paper, Tools, Parts scattered	Dispose of unneeded items. Keep floor clean	Clean up equipment, clear out corners	Organize and mark all sections. Organize storage	Eliminate causes of dirt and disorder
2	Rationalising (Hoshin)	No clear management system	Clear Responsibility	Instructions from top broken down at each level	Levels work cooperatively to coordinate efforts	Work together to create common goals, individual skills
3	Improvement Team Activities	No desire to get involved in teams	Suggestion Scheme. Team activities start	Autonomous Teams begin. Groups: 2 projects per month Individual: 1 suggestion / month	Alignment of teams & company. Groups: 4 projects per month Individual: 2 suggestions / month	After work activities. Groups: 6 projects per month Individual: 5 suggestions / month
4	Reducing Inventory & Lead Times	WIP is a necessary evil	Inventory reduction launched. Inventory reduced in at least one area	Start a handbook-based inventory reduction program	Integrating production lines results in lower inventory. 75% inventory reduction	Make only what customers want
5	Changeover	Nothing done	Some employees learn SMED	10% of changeovers are SMED	SMED on all machines. Single files in office	Single operators can do SMED on all machines

6	Value Analysis & Methods Improvement	Shotgun approach to improvement	Systematic improvement has begun	People have learned how to do system improve at all processes	Pokayoke and low cost automation result in doubling productivity	Improvement making is systematic and continual
7	Zero Monitoring Manufacturing	Low recognition that monitoring (watching machines) is waste	Everyone recognizes that monitoring is waste	10% process have unmanned operation during breaks	All machines can operate during breaks; operators handle > 1 machine	All machines are running on one-cycle automation zero monitoring
8	Coupled/Synchronised Manufacturing	Each workplace functions independently	Emphasis on connections between processes	Factory employees set up kanban stores	Clearly visible kanban established throughout. Fishbowl offices	All inter-department walls are demolished. Goods and info flow freely
9	Maintenance	Run machines into the ground	Everyone understands the need for TPM. OEE is measured.	Operator responsible for elimination of 3 evils (contamination, inadequate lubrication, disoperation)	Full commitment to focused improvement. Zero breakdown goal. Downtime reduced by 75%	A focused improvement programme is in place OEE is 95%
10	Time Control & Commitment	Work & break times left to operators discretion	Morning meetings are held. Safety equipment is worn at all times	Supervisors meet to establish time control issues. Work starts promptly. Tools returned	Workers are conscientious about time. No early stops. Next day assignments known	Rhythm is established. Value adding work performed for full shift
11	Quality	Quality left to inspectors	Operators inspect	Defect info passed along	Pokayoke's are being built	Full pokayoke Zero

			their own products	immediately. Prevention takes place immediately		customer complaints
12	Supplier Development	Manufacturer / Supplier relationship limited to purchasing, acceptance, price negotiation	Technical assistance is given in response to supplier queries. Support for upstream process	Send technical assistance to suppliers. Provide QC and IE support	Suppliers and manufacturers work together on implementing all 20 keys	Suppliers have reached a score of at least 70 on the 20 keys
13	Waste Elimination	Little understanding of waste	Everyone knows what waste really is	Waste elimination begins by operators	Actual work ratio is 85% (Value Added v Waste)	Actual work ratio is at least 95%
14	Worker Empowerment	Improvement is someone else's job	Improvement corners set up. Teams make their own shelves, Tables, etc	Workers participate in making their own tools. SMED has begun	Low cost automation devices are designed and made in house	Factory makes and uses its own automation devices such as detectors, sensors, sorter
15	Skill Versatility	No one is interested in skill versatility	Cross training begins. Willingness to learn	Complete cross training being implemented. Everyone's core skills have doubled	Everyone embraced the goal of the adaptable factory. Cross training across classifications	The organization is fully able to adapt to change by re-assigning trained employees. Most on 'Master' level
16	Scheduling	Deliveries rarely on schedule	Some late delivery. Non uniform	Work operations leveled throughout	100% on time delivery, leveled	Level schedules, with pull, plus level

			production still exists	the month. Clear visible schedules	schedules, plus level 3 on all keys	4 on all other keys
17	Efficiency Control	Indirect efficiency control reporting used	Labor content reported by family. Efficiency charts established	Standard and actual times set and reviewed. Graph's kept	Efficiency control monitored and graphed daily	Everyone motivated to achieve suitably challenging goals
18	Shop Floor Information Systems	Low awareness of CIM, OA, POP information	Used in limited areas	A factory wide automation policy developed	CIM system fine-tuned after level 3 in other keys. POP system implement	CIM and POP systems fully implemented
19	Energy Materials &	Conservation not considered	Company wide conservation policy begun	Savings on existing equipment begun	Comprehensive programme in place	Full pursuit of conservation
20	Leading Technology & Benchmarking	No monitoring of competitors	Position with respect to competitors established	Keeping pace with average for the industry	One step ahead of industry average. Easy incorporation of new technologies	Site technology amongst the best in the industry. Monitors leading edge technology

Source: (Bastleer, 2011, p11)

2.3.7 Challenges to Achieving Operational Excellence

Achieving Operational Excellence results in benefits for any organization. However, there exist challenges which must be considered in its pursuit. According to the (OECD, 1992), these challenges include the following:

- a. Effecting cultural change:** operational excellence is truly a transformation of culture, and a culture change usually meets with resistance. Change will only be achieved when the people involved see real value in changing the way work is executed.

- b. Deploying the right talent:** the failure of an operational excellence effort may result from people leading the initiative lacking the required training, skills and knowledge. Initiatives must be driven by people who are well trained or certified like the black belts and greenbelts in the case of Six Sigma. They can either be hired externally or develop internally.
- c. Operational silos:** this represents the single greatest obstacle to allowing a holistic view of operations across processes and throughout the enterprise and thus, to achieving operational excellence. The resulting poor visibility applies not just to the lack of visibility of operational activities across the value chain, but to the lack of visibility of the strategy as well as performance. Without visibility, the organization cannot react to change quickly. Long term planning is impaired also.
- d. Inefficiencies in execution:** when the strategic vision which is to be implemented at the tactical level through one or more competencies is not effectively executed, this hampers the pursuit of Operational Excellence. This is also referred to as the lack of an execution culture.
- e. Compliance and risk management:** this is another problem area that can impede operational excellence. Some organizations lack internal and/or external controls. Others may knowingly be committing violations, or suffering from product quality of safety issues. This can lead to complaints, regulator investigations and high added costs of warranty or compensation claims and penalties.
- f. Reactive operational culture:** this, along with resource constraints, impairs operational excellence. Companies focus on day-to-day operations to the exclusion of the long-term strategic view. They take a reactive rather than a proactive approach to improvement and innovation. The attitude and ways are exacerbated by the lack of tools, resources or skills. The result is a lack of competitiveness that translates into weaker performance against industry peers.

2.4 Conceptual Framework

Miles and Huberman (1994) defined a conceptual framework as a visual or written product, one that “explains, either graphically or in narrative form, the main things to be

studied—the key factors, concepts, or variables—and the presumed relationships among them” (p. 18).

The criticality of the conceptual framework is to allow understanding that it is primarily a conception or model of what is out there that the researcher plans to study, what is going on with these things and why.

The aim of the research was to create a model of operational excellence that will be used to ultimately improve organizational performance for FNBZ. The model proposed in this study is not an exhaustive one as it can be further extended by adding other variables that have not been made reference to.

The model was drawn from a detailed literature review in order to identify the factors of operational excellence that have an impact on the performance of an organization. The researcher has appreciated that there are other studies that have investigated various factors that have a critical role in the success of an organization. However, pertaining to operational excellence, the key elements of the model are:

1. Structural elements - issues relating to company size (number of employees), age (years in business) and purpose (consumer/wholesale financial services) and Human capital (job placement and skills level).
2. The environmental variables used to analyse FNBZ. These variables are divided into two categories:
 - External environment reflected by the following variables: competition, customers and suppliers;
 - Internal environment reflected through the following variables: strategy, leadership, performance measurement process, innovation and development, information technology and corporate governance.
3. The performance of the operations quantified on the bases of its results as scored on key metrics.

The conceptual model is depicted in Figure 2.4 below.

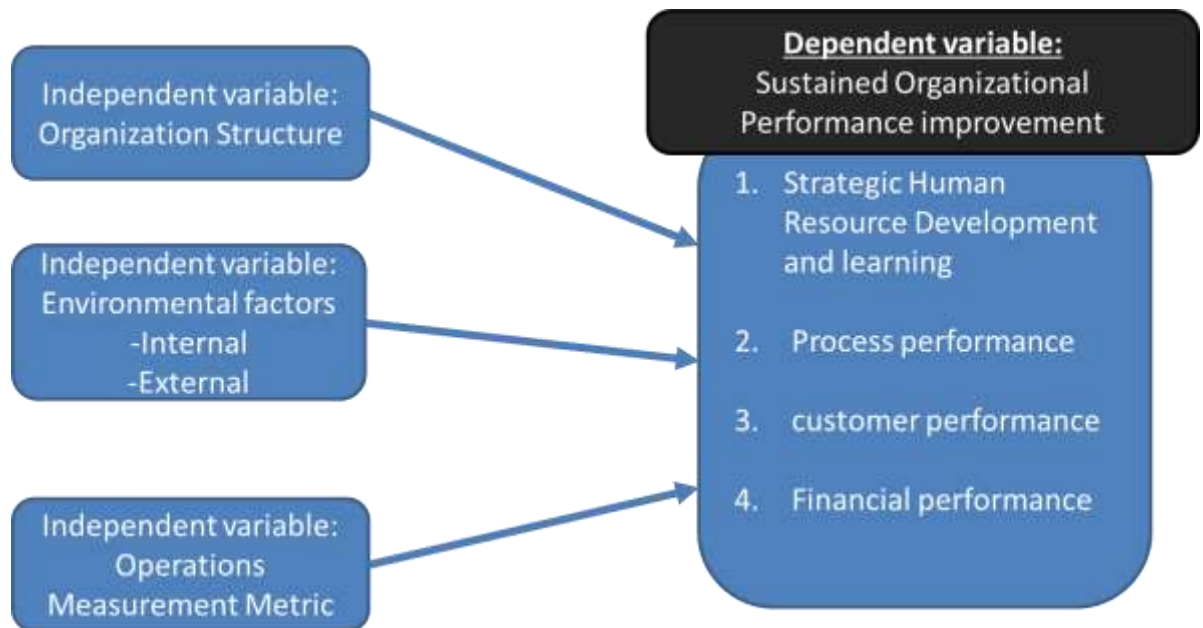


Figure 2.4: FNBZ Innovative Strategic Operational Excellence Conceptual Model
Source: Author (2018)

2.5 Knowledge Gap

From the literature reviewed it is very evident that there has been very little study in Zambia pertaining to operational excellence and its underlying impact on organizational performance. Further, this knowledge gap is made severely acute specifically in addressing the requirements of service organizations and more specifically the commercial banks in Zambia. Therefore, the research was carried out to address in part this critically acute knowledge gap. The research is also a basis for further studies and could be an aid to benchmark best practices or to derive theory from the study.

2.6 Chapter Summary

The chapter looked at theoretical and empirical evidence from previous studies on the impact of operational excellence on organisational performance. The definitions and context of operational excellence, organisational performance and strategy were discussed with adoptions stated based on the research proposition, context and direction. This information was vital in setting out the research process.

The review outlined the merits and demerits of the different types of models. From the literature review, it can be deduced that there is a growing interest in studying the application of operational excellence to organisations in order to improve performance.

However, in the case of Zambia, very little attention has been paid to the study of operational excellence as a key factor to improve organisational performance particularly in the financial services sector. As a result of this gap, the significance of this study cannot be overemphasised.

The following chapter presents a description of the research process and research methods used in this study. This identifies and defines the research methodology, tools and techniques, the design strategy and philosophy that was applied to the study.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter of the study provides the detailed description of the entire process of how data was collected and analysed. It explains the research design that was followed, the target population and the sample size. Other aspect of the methods include how the samples were drawn, the instruments of data collection, the pretesting of the instruments and the ethical values that were observed. The chapter also explains the research design.

3.2 Research Philosophy

According to the research onion theory of Saunders (2012) there are four research philosophies. These are i) pragmatism, ii) positivism, iii) interpretivism and iv) Realism.

Positivism entails working with an observable social reality to produce law-like generalizations. The label positivism refers to the importance of what is ‘posited’ – i.e. ‘given’. This emphasizes the positivist focus on strictly scientific empiricist method designed to yield pure data and facts uninfluenced by human interpretation or bias. (Crotty 1998).

Realism focuses on explaining what we see and experience, in terms of the underlying structures of reality that shape the observable events. Realism research philosophy relies on the idea of independence of reality from the human mind. This philosophy is based on the assumption of a scientific approach to the development of knowledge. Realism can be divided into two groups: i) Direct realism also known as naïve realism portrays the world through personal human senses and ii) Critical realism which argues that humans do experience the sensations and images of the real world (Crotty 1998 and Saunders 2012).

Interpretivism, like realism, developed as a critique of positivism but from a subjectivist perspective. Interpretivism emphasizes that humans are different from physical phenomena because they create meanings (Crotty 1998). Interpretivism argues that human beings and their social worlds cannot be studied in the same way as physical

phenomena, and that therefore social sciences research needs to be different from natural sciences research rather than trying to emulate the latter.

Pragmatism strives to reconcile objectivism and subjectivism, facts and values, accurate and rigorous knowledge and different contextualized experiences. It does this by considering theories, concepts, ideas, hypotheses and research findings not in an abstract form, but in terms of the roles they play as instruments of thought and action, and in terms of their practical consequences in specific contexts. For a pragmatist, research starts with a problem, and aims to contribute practical solutions that inform future practice (Kelemen and Rumens 2008, Saunders 2012).

The philosophy that was followed in this study was pragmatism. As a philosophical standpoint, pragmatism recognizes that there are many different ways of interpreting the world and undertaking research, that no single point of view can ever give the entire picture and that there may be multiple realities. That is why in this study both qualitative and quantitative methods were employed in the process of data collection and analysis. Further, Pragmatists adhere to the view that only “factual” knowledge gained through measurement, is trustworthy.

3.3 Research Design and Methodology

According to Kothari (1985), research methodology is a well-defined systematic way of solving a research problem. It is essentially, the procedures by which researchers go about their work of describing, explaining and predicting phenomena. Research methodology is a science hinged on the consistent theoretical analysis of the methods applied to a field of study. The methodology is useful in the investigation and analysis of finding solutions to scientific and social problems through objective and systematic approach. The methodology must describe the search for knowledge, that is, a discovery of hidden truths. The research design for this study was based on the research onion (Saunders, Lewis and Thornhill, 2012). This is illustrated in Figure 3.1.

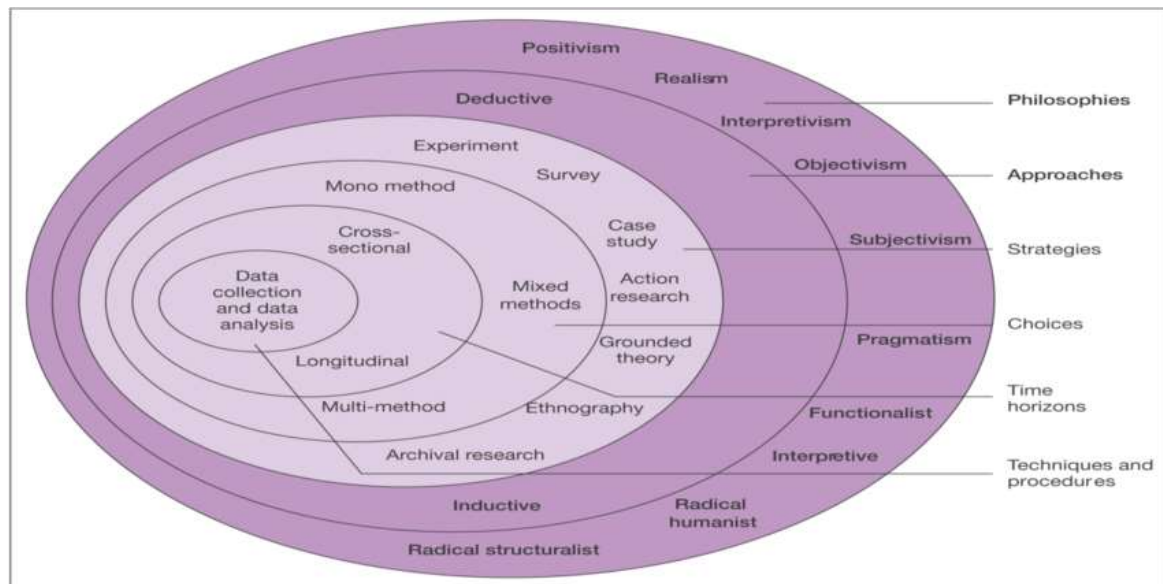


Figure 3.1. Research Onion of Saunders (2012) *Source: Saunders et al (2012, p. 15)*

According to Saunders (2012) the research study originates from a philosophy. There are four philosophies. These are positivism, realism, interpretivism and pragmatism. In terms of approaches, Saunders (2012) suggests that there are three approaches, thus, deduction, abduction and induction. The approaches are followed by the methodological choices. These include mono method, mixed methods and the multi-method; then follow the strategies, succeeded by time horizons and then finally techniques and procedures as indicated in the research onion above.

3.3.1 Logical Approach to the Research

The research onion shows two main approaches to research, thus, deduction and induction. Abduction is a consequence of applications of deduction and induction whilst pragmatism is the embracement of all these theories to solve a practical problem.

Deduction involves the development of a theory that is then subjected to a rigorous test through a series of propositions (Saunders 2012, Blaikie 2010). Induction is another approach discussed by Saunders (2012) as an alternative approach that focuses on the formulation of a theory, often expressed as a conceptual framework. Besides deduction and induction in Saunders's research onion, there is *Abduction*. Instead of moving from theory to data (as in deduction) or data to theory (as in induction), an abductive approach moves back and forth, in effect combining deduction and induction (Suddaby 2006 and Saunders 2009). *Pragmatic* logical standpoint aims to reconcile and apply all the three

logics according to the specific type of real-life problem. Van Maanen et al. (2007) also stresses that deduction and induction are embraced in pragmatic logic for testing plausible theories.

Consequently, the research applied pragmatic logic to processes results and solves for a particular problem in the real world by combining deduction and induction. This, as was noted earlier, matches what many business and management researchers actually do. Pragmatism begins with the observation of a ‘surprising fact’ at any point; it then works out a plausible theory of how this could have occurred and how best to solve for the problem.

3.3.2 Methodological Choice

According to Saunders (2012) research onion, research methodological choices is composed of Mono method quantitative, Mono method qualitative, multimethod quantitative, mixed method simple as well as mixed method complex. In a research, researchers can use single data collection technique and corresponding data analysis procedure (mono method) or use more than one data collection technique and data analysis procedure (multiple method). Mixed method approach is where both quantitative and qualitative data collection techniques and analysis procedure is used (Saunders et al., 2012).

In this study, the researcher employed the mixed method-simple, where quantitative and qualitative data collection and analysis procedure were used to answer research questions and test the hypotheses. The closed ended questionnaire employed to be largely a 5-point Likert scale as well as yes and no questions. Guided interviews were done as well for top level managers. The study applied quantitative research techniques. Rajasekar et. al (2013) describes quantitative research as based on the measurement of quantity or amount. Here a process is expressed or described in terms of one or more quantities. The result of this research is essentially a number or a set of numbers. The characteristics of quantitative research method that made this approach suitable are that;

- It is numerical, non-descriptive, applies statistics and/or mathematics
- It is an iterative process whereby evidence is evaluated
- The results are presented in Tables and graphs

- It is conclusive
- It investigates the what, where and when of decision making.

On the other hand, qualitative research is concerned with qualitative phenomenon involving gaining an understanding of underlying reasons, opinions, and motivations (Rajasekar et al., 2013). Some of the characteristics of qualitative research/method that were suitable for the study are that:

- It is non-numerical, descriptive, applies reasoning and uses words
- Its aim is to get the meaning, feeling and describe the situation
- Qualitative data can only be graphed after codification of data
- It is exploratory
- It investigates the why and how of decision making.

Qualitative research investigates why certain data are random. Therefore, qualitative methods can be used to understand the meaning of the numbers obtained by quantitative methods.

Therefore, the nature of the problem that was being researched upon necessitated use of both statistical and qualitative methods to uncover the findings and to arrive at a reasonable and reliable practical solution faced in the social world.

3.3.3 Research Design Strategy

According to Saunders (2012) research onion model, strategies of research undertaking include: experiment, survey, archival research, case study, ethnography, action research, grounded theory and narrative enquiry. In this research study, case study design was chosen. The case study design involves choosing of one case out of many so that findings from the chosen case can represent the rest of the cases. The FNBZ case was chosen to represent financial institutions in Zambia.

3.3.4 Time Horizon

Unlike longitudinal studies that aim at tracking the trends of the characteristics of a phenomenon over a relatively longer period of time, Cross-sectional studies involve data collected at a defined time (Saunders, 2012). In this study, a cross sectional time horizon

was followed in order to maintain a finite timeline to completion and the period of study was between July 2017 and June 2018.

3.3 Population and Sampling

The population is made up of universal group of individuals or entities that have one or more characteristics in common and is of interest to the researcher in terms of study (Saleemi, 2009).

3.4.1 Target Population

The defined target population and is also known as the theoretical population revealed that the bank had over 170,000 customers. The Bank also had nearly 600 employs who are involved in core areas of operations and services from end-to-end (Business, Operations, Finance, Human Resources and Credit).

3.4.2 Study Population

According to Saleemi (2009), the subset of the target population that the researcher has access and can apply conclusions from the research is the study population. The study population is also called the accessible population. It is from this population that the researcher draws samples. This therefore, means research study population refers to all people or things that could give data to help answer the research questions and draw conclusions from the research findings. The study population of this research was made up of the employees of FNBZ. The study population was 32-50 customers and 100 employees who are involved in core areas of operations and services from end-to-end (Business, Operations, Finance, Human Resources and Credit).

3.4.3 Sampling

According to Webster (1985), a sample is a finite part of a statistical population whose properties are studied to gain information about the whole population and draw conclusions and recommendations. Webster (1985) further states that the methodology used to sample from a larger population will depend on the type of analysis being performed, but will include simple random sampling, systematic sampling and observational sampling. For the research carried out, the sample was extracted from the study population of employees and management. The sampling techniques applied and the rationale are described in section 3.4 under Sampling Techniques.

3.4.4 Sampling Techniques

The study also employed probability or random sampling. Random sampling was used to draw sample elements from a sampling frame that had the customer ids, and contact details of all customers. It was also used to sample employees of the bank. This sampling technique was used as it is based on a procedure that is based upon statistics. The use of statistics allowed the researcher to be objective in selecting which sample elements to select and thus increased the validity of the study. It permitted the researcher to demonstrate the samples representativeness and made possible the more explicit identification of possible biases.

The other sampling technique was to select specific management and non-management employees for interview sessions. The researcher employed purposive or targeted sampling for this data collection approach

3.4.5 Sample Size

Wells (1994) states that sampling involves selecting in a systematic way in order that inferences can be drawn from the observation on the sample about the whole population. For the study there is a known population of customers and employees and thus the sample size for quantitative assessment was 100 at 95% precision as determined using Glens and Israel (1992) Table on sampling size and precision.

According Yamane (1967:886), the formula for calculating sample size is:

$$n = \frac{N}{1 + N(e^2)}$$

Where:

n= the sample size

N=the population size of bank staff

e= the acceptable sampling error

*95% confidence level and p=0.5 is assumed

Therefore, given that

N=638 (employees); N=170,000 (customers), and

e= 7%

Then it follows that our sample size (n) for our respondents from the banking staff and customers is given as: n=152 (employees); n=203 (customers).

However, due to limitations and constraints to survey customers and employees by bank authorities, the actual sample sizes used for the study were 100 for employees and only 32 for customers.

3.5 Research Instruments

Saunders (2012) states that a questionnaire should be objective, reliable and have a valid set of items that can gauge individual differences in the construct and can predict changes in others thus allowing for meaningful and valid analysis and interpretations to be drawn from the data. Due to its flexibility and ability to give respondents time and maintain anonymity, the researcher used self-administered closed-ended questionnaires as a key primary data collection method. The questionnaires were in form of 5-point Likert scale questionnaire. Each research objective and related question was addressed in the different sections of the questionnaire. The respondents were required to respond from a range of responses from strongly agree to strongly disagree to the assertion. For example, an assertion such as: *the bank meets all your needs as a customer* 1=strongly disagree, 2=disagree, 3=neither agree nor disagree, 4= agree and 5 strongly agree. The first part of the questionnaire contained demographic information of the respondents such as age of the respondent. The research also employed interviews to collect primary data. An interview guide contained themes that guided the researcher on how to conduct one-on-one interviews with the senior management official at the bank. During interviews, there was an opportunity for the researcher to make follow-up questions in order to dig deeper into the respondents' view.

3.5.1 Pre-testing the questionnaire

The researcher performed pre-testing of the questionnaire with employee of another bank that share similar characteristics with the employees and clients of FNBZ. This revealed the suitability and effectiveness of the questionnaire in relation to answering the research questions. The questionnaire was developed based on the factors from the operations model for financial institutions as espoused and applied by Noble (2008).

3.5.2 Data Collection Procedures

The researcher used triangulation as a means to establish data validity as the basis of the data collection strategy. The quantitative closed ended questionnaire was self-administered while the interviews were one on one in-depth. The advantages of using the self-administered questionnaire are that it is fast. It can cover many people at once. Interviews have an advantage of generating in-depth data, which would not be generated by a closed ended questionnaire. The questionnaires used for this study are attached as appendix I and appendix II of this document. The guided interview questions are also documented in appendix III of this document.

3.5.3 Data Analysis and Presentation

The data analysis, involved a Mean Scores and Standard deviation methods to determine the magnitude and direction of the relationships among variables. Further, chi-square and independent T-test analyses were adopted. The mean score and standard deviation helps in ranking some factors responsible for influencing an outcome, but they are not detailed enough to settle an argument. The employment of independent T-test and the Analysis of Variance (ANOVA) side by side with the mean score and standard deviation was aimed at strengthening the validity of the findings. To analyse qualitative data, the researcher employed content analysis.

The full summary of the research design matrix is outlined below in Table 3.1.

Table 3.1: Research Design Matrix

Research Objective	Research Question	Philosophical Assumptions	Population and Sampling of unit of Analysis	Data Collection Method	Data Analysis Method
To describe the dominant characteristics of the operations at First National Bank Zambia.	What operations factors are considered dominant at First National Bank Zambia?	Philosophy: Pragmatism Epistemology : Pragmatic Logic: Pragmatic	Random sampling of the population of all bank employees enlisted	Survey Questionnaire	Multivariate Analysis

To evaluate the impact of the current operations model on organization performance at First National Bank Zambia	How does the operational model impact on organizational performance at First National Bank Zambia?	Philosophy: Pragmatism Epistemology : Pragmatic Logic: Pragmatic	Random sampling of the population of all bank employees enlisted Stratified random sample of Population of all bank customers enlisted	Survey Questionnaire Guided Interview Sessions	Multivariate Analysis Content Analysis
To establish the barriers affecting implementation of the working innovative operational excellence model at First National Bank Zambia	What factors act as barriers towards implementation of the successful innovative operational excellence model at First National Bank Zambia?	Philosophy: Pragmatism Epistemology : Pragmatic Logic: Pragmatic	Random sampling of the population of all bank employees enlisted Stratified random sample of Population of all bank customers enlisted	Survey Questionnaire Guided Interview Sessions	Multivariate Analysis Content Analysis

Source: *Author (2018)*

3.6 Issues of Validity and Reliability

According to Pellissier, (2008, p.12), research validity can be divided into two groups: i) Internal and ii) External. It can be specified that internal validity refers to how the research findings match reality, while external validity refers to the extent to which the research findings can be replicated to other environments. Therefore, validity refers to the perceived accuracy of the data collection and analysis and also to whether the data is advancing the end objective of the research. Golafshani, (2003) further espouses that research reliability is the ability of the research to regenerate the same outcomes when the same methods and methodology is applied. Joppe (2000) supports this position by stating that reliability is achieved if the extent to which results are consistent over time

and the results of a study can be reproduced under a similar methodology, then the research instrument is considered to be reliable.

In terms of internal validity, triangulation as well as pretesting of the research instruments was done. The Crobach's alpha was also used to test the reliability of the items in the questionnaire. Only items that scored above 0.75 were included in the final questionnaire. In terms of external validity, the researcher used a probability sampling method to select employees and the clients of the bank who were required to answer the questionnaire.

3.7 Limitations of the Study

The researcher encountered a number of critical limitations during the process of conducting the study. Some of the respondents who were in the management level were generally busy and this made it difficult to get the interview session completed in good time. However, the researcher made several visits and communicated through e-mail to contact them so as to get favorable responses. Some respondents were also reluctant in divulging information about their organizational culture and organizational performance as well as other key aspects relevant to the study as this was viewed as being confidential. However, the researcher reassured them that the information obtained from them would be used for the purposes of the study only.

The study was limited to the use of structured questionnaires and interviews as data collection tools. The questionnaires were closed ended and this denied the respondents a chance to express their opinions which may be outside the structure though the interviews allowed for an opportunity for the respondents to express their opinions more vividly. The interviews were limited to only a targeted group of management and staff representative of the organization of which, some responses may have encompassed their personal views.

Generalizing the findings to other organizations was a limitation in that since every commercial bank in Zambia had its own unique set of cultural variables and organizational setup.

3.8 Chapter Summary

This chapter described the approach taken to investigate the research problem and the rationale for the application of specific procedures and/or techniques used to identify, select, process, and analyse information applied to understanding the problem, thereby, allowing for critical evaluation of the reliability and validity of the study. The Methods chapter addressed two key questions regarding the research; i) how was the data collected or generated and, ii) how was it analysed and presented.

Therefore, this chapter outlined the methods used to gather data, instruments used and the justification of using the instruments and the methods. Sampling methods used during the course of data gathering were presented. The chapter also highlighted the target population and the sample size, justification for its representation and its significance to the study. The selected methodology served the important purpose of restricting the study to investigating only relevant matters and maintained coherence in the study process.

CHAPTER FOUR

DATA ANALYSIS AND DISCUSSIONS OF RESULTS

4.1 Introduction

The previous chapter described the methodology used in carrying out the research and also outlined the process applied for data collection and analysis. In this chapter, research results are presented for analysis and discussions. Statistical results are presented including factor correlations and regression results. The results are presented in the form of Tables and Figures (charts and graphs). These results provide for research questions answers through which research objectives are met.

4.2 Respondent Profiles

The respondent profile consisted of employees as well as customers and their related characteristics that are relevant to the operations and service delivery assessment.

4.1.1 FNBZ Employees Bio Data

Figure 4.1 shows that the majority of the respondents were in the age range 20 – 29 (60 respondents) representing 60% followed by those who were in the age range 30 – 39 (19 respondents) representing 19% and then those who were in the age range 40 – 49 (17 respondents) representing 17%. The least age group was those in age range 50 years constituting 4% and representing only 4 respondents.

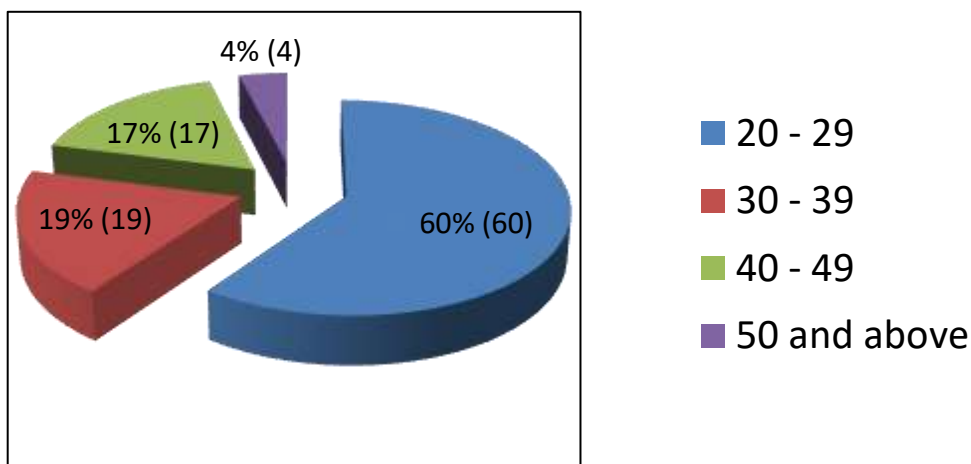


Figure 4.1: Age Categories of the Respondents

Source: (Author (2018))

As indicated in Table 4.1, 57 respondents representing 57% were women while 43 respondents representing 43% were men.

Table 4.1: Sex of the Respondents

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	43	43.0	43.0	43.0
	Female	57	57.0	57.0	100.0
	Total	100	100.0	100.0	

Source: (Author (2018))

The sample size was dominated by those who had bachelor's degree who were 39 in the sample representing 39%. This was followed by those who had diplomas who were 33 representing 33%. Those who had masters and above were 24 representing 24% while those with professional qualifications were 4 representing 4% as shown in Figure 4.2 below.

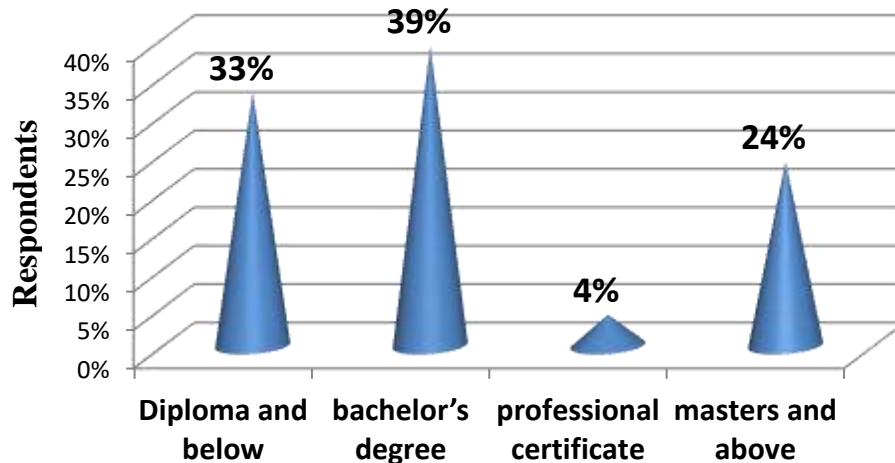


Figure 4.2: Level of Education of the Respondents *Source: (Author (2018))*

From the finding, most of the respondents were in middle management 54, representing 54% followed by those in lower management 36 representing 36% and finally top management were 10 representing 10% as shown in Figure 4.3 below.

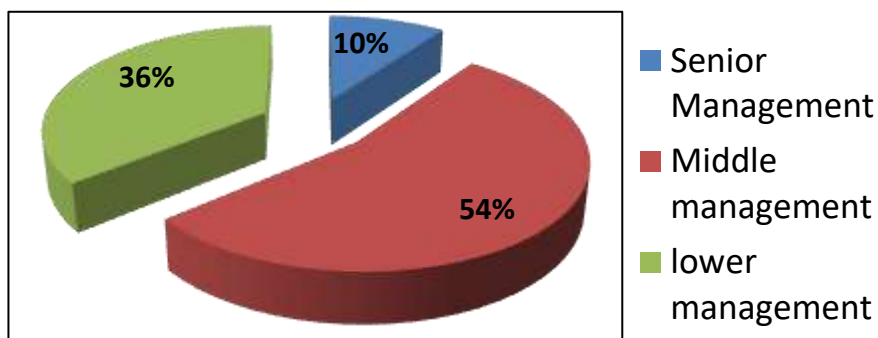


Figure 4.3: Employment Category of the Respondents *Source: Author (2018)*

Figure 4.4 below shows that out of 100 respondents 24 respondents representing 24% had worked for the bank for one year and below, 47 respondents representing 47% had worked for the period one year to three years and 29 respondents had worked for the period three years to five years.

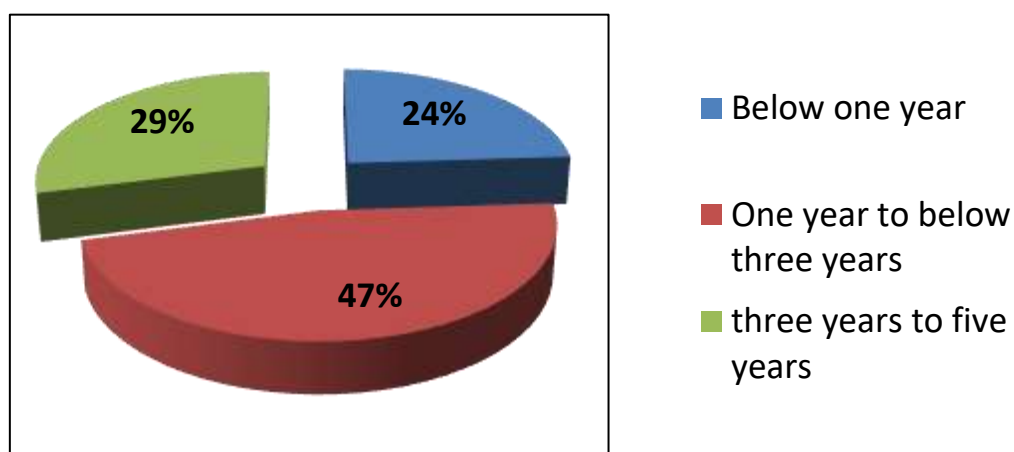


Figure 4.4: Years Worked in The Organisation *Source: Author (2018)*

4.1.2 FNBZ Customers Bio Data

Out of 32 respondents, 43.8% were individual clients of the bank, 15.6% were SMEs, 18.8% were large corporations, 12.5% were clients in the agriculture sector while 9.4% were clients from NGOs and Government sectors as shown in Figure 4.5 below.

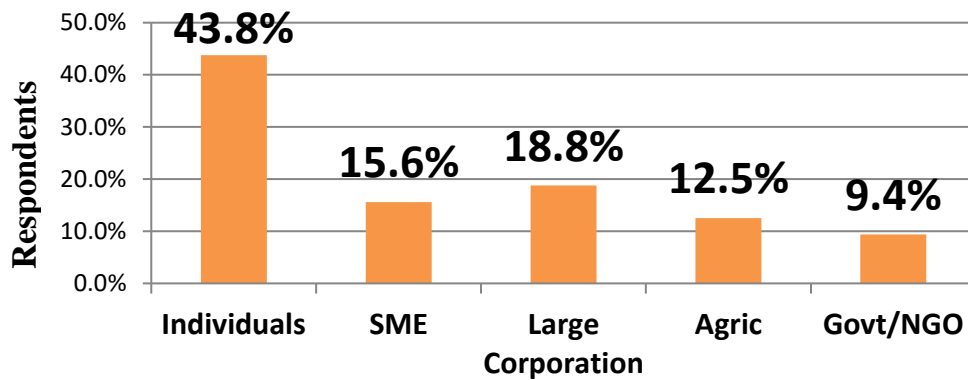


Figure 4.5: FNBZ Customer Types

Source: Author (2018)

From the findings, the age analysis of the respondents revealed that 40.6% had been with the bank for 3 to 8 years, 34.4% had been with the bank between 1 year and 3 years, while 25% of the respondents had been with the bank for less than 1 year as highlighted in Figure 4.6 below.

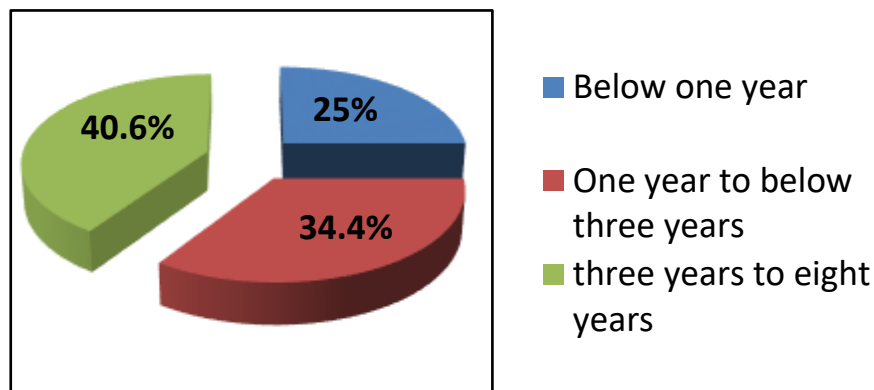


Figure 4.6: Customer Age Analysis

Source: Author (2018)

Most of the bank customers 50% had current account, while 34.4% have savings account, 9.4% loan account and 6.2% of the respondents have an investment account as shown in Figure 4.7 below.

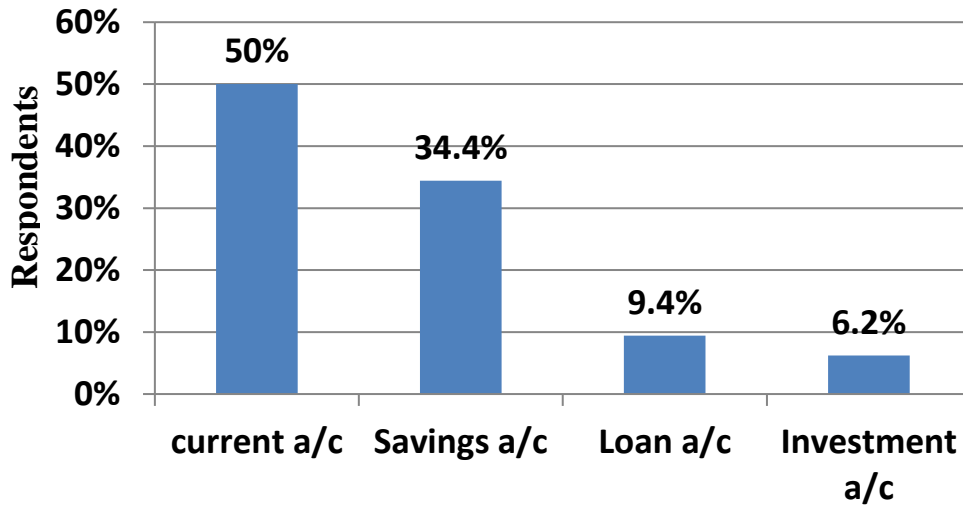


Figure 4.7: Types of Product/Service Maintained by Customers at FNBZ

Source: Author (2018)

From the research findings, Figure 4.8 below shows that out of 32 respondents, 6.2% said that the service was good at the bank, 37.5% said that the service was poor while 56.2% felt that the overall service level was moderate.

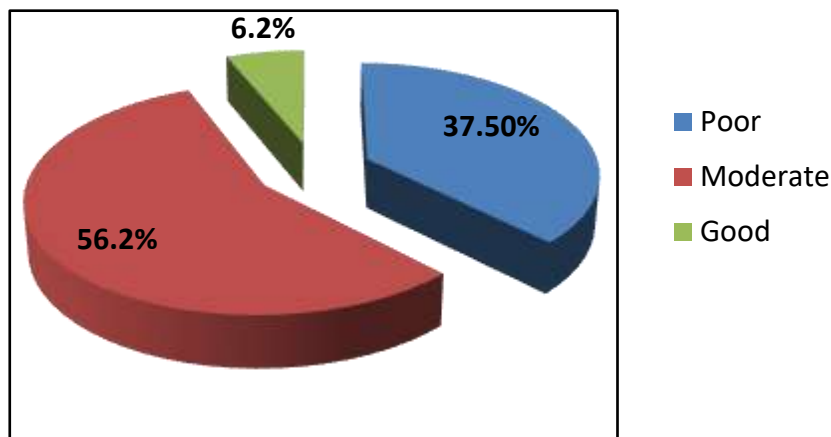


Figure 4.8: Customer Overall Service Level Satisfaction with Bank

Source: Author (2018)

Nine (9) of the services were selected to test the extent to which customers are satisfied with the bank services three (3) of them were found to be satisfying to the respondents on a scale of 1 – 5 whereby a mean score above 2.5 implies satisfaction. The service

which customers were satisfied most was security of environment with the mean score of 3.04 on the scale of 5. This was followed by education of new products/services with the mean score of 2.65 and then followed by digital banking services with the mean score of 2.62. The rest of the services were found to be unsatisfying as shown in Table 4.2. The average of all the 9 mean scores was found to be 1.98 suggesting moderate customer satisfactions with the services of the bank amounting to 39.5%.

Table 4.2: Statistics on Customers Satisfaction with the Selected Services of the Bank

	Tariff and rates	Customer service quality	Efficiency of service	Service reliability	Communication/ education of new products/ services	Products/ services range	Security of environment	Convenience and accessibility of bank services	Digital banking services
N	32	32	32	32	32	32	32	32	32
Missing	0	0	0	0	0	0	0	0	0
Mean	1.90	1.57	1.89	1.40	2.65	1.29	3.04	1.42	2.62
Std. Dev.	.718	.498	1.143	.402	0.730	.456	.636	.643	.814

Source: Author (2018)

Table 4.3 shows that 15 respondents out 32 respondents representing 46.9% said that the bank caters for all their needs while 17 respondents representing 53.1% said that the bank does not meet all their needs based on the 9 factors selected.

Table 4.3: Customer Needs Satisfaction by Bank

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Yes	15	46.9	46.9	46.9
No	17	53.1	53.1	100.0
Total	32	100.0	100.0	

Source: Author (2018)

Table 4.4 shows that out of 32 respondents, 26 representing 81.2% use services of other banks while 6 respondents representing 18.8% do not use the services of other banks.

Table 4.4: Alternative Banks' Service Utilization by Customers of FNBZ

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Yes	26	81.2	81.2	81.2
No	6	18.8	18.8	100.0
Total	32	100.0	100.0	

Source: Author (2018)

Table 4.5 indicates that most of the respondents who use the services of other banks, do so because of the customer service quality as well as service reliability in alternative banks.

Table 4.5: Reasons for Using Services of Alternative Banks

Factor	Frequency	Percent	Valid Percent	Cumulative Percent
Tariff and rates	3	9.4	9.4	9.4
Customer service quality	6	18.8	18.8	28.1
Efficiency of service	5	15.6	15.6	43.8
Service reliability	6	18.8	18.8	62.5
Communication/education of new products/services	2	6.2	6.2	68.8
Products/services range	2	6.2	6.2	75.0
Convenience and accessibility of bank services	1	3.1	3.1	78.1
Digital banking services	1	3.1	3.1	81.2
Non Applicable	6	18.8	18.8	100.0
Total	32	100.0	100.0	

Source: Author (2018)

4.3 Discussion of Findings

The results of the research were sufficient to answer the research questions and achieve the set out objectives. The findings discuss each objective and research question in detail to provide for the statistical interpretation of the results.

4.3.1 Objective 1: To Describe the Dominant Characteristics of Operations at First National Bank Zambia

The researcher adopted the factors from the operations model for financial institutions as espoused by Noble (2008) this identified a number of factors including: i) Vision, ii) Ownership, iii) Implementation Plan, iv) Architecture, v) Measurement, vi) Capabilities, vii) Culture, viii) Governance and ix) Transformation and Improvement. The study adopted this approach to identify and describe the dominate factors of the operations at FNBZ.

Table 4.6a shows the research findings relating to the vision factor. Most of the respondents disagreed to the assertion that the operations model had vision elements. 71 respondents representing 71% strongly disagreed while 29 respondents representing 29% disagreed.

Table 4.6a: Vision - The operations at the bank has end-to-end business process aligned to the business strategy and defines end state performance levels - Cost; Risk, Speed; Accuracy

	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly disagree	71	71.0	71.0	71.0
Disagree	29	29.0	29.0	100.0
Total	100	100.0	100.0	

Source: Author (2018)

Table 4.6b shows that majority of the respondents, 58 representing 58% neither agree nor disagree to the assertion that their operations model include ownership aspects, while 14 respondents representing 14% disagree and 28 respondents representing 28% agree.

Table 4.6b: Ownership - The operations at the bank has Senior Management individuals who are responsible for each end-to-end business process.

	Frequency	Percent	Valid Percent	Cumulative Percent
Disagree	14	14.0	14.0	14.0
Neither Agree nor disagree	58	58.0	58.0	72.0
Agree	28	28.0	28.0	100.0
Total	100	100.0	100.0	

Source: Author (2018)

56 respondents representing 56% strongly disagreed that FNBZ has an implementation plan, while 36 respondents representing 36% disagreed. 8 respondents representing 8% neither agreed nor disagreed to the assertion as shown in Table 4.6c.

Table 4.6c: Implementation Plan - The operations at the bank has a well thought out plan to implement the operational excellence vision

	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly disagree	56	56.0	56.0	56.0
Disagree	36	36.0	36.0	92.0
Neither Agree nor disagree	8	8.0	8.0	100.0
Total	100	100.0	100.0	

Source: Author (2018)

Table 4.6d shows that majority of the respondents 59, representing 59% strongly disagreed to the assertion that FNBZ operation plan would be effective with architectural elements, while 20 respondents representing 20% disagreed and 21 respondents representing 21% neither agreed nor disagreed.

Table 4.6d: Architecture - the operations at the bank has an Understanding of each end-to-end business process and how they all fit together.

	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly disagree	59	59.0	59.0	59.0
Disagree	20	20.0	20.0	79.0
Neither Agree nor disagree	21	21.0	21.0	100.0
Total	100	100.0	100.0	

Source: Author (2018)

Table 4.6e shows that majority of the respondents 53 representing 53% disagree to the assertion that measurement could form the best part of the operations model for FNBZ.

Table 4.6e: Measurement - The operations plan at the bank has an End-to-end customer-oriented process measurement, Aligned to Voice of Customer VOC.

	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly disagree	43	43.0	43.0	43.0
Disagree	53	53.0	53.0	96.0
Agree	3	3.0	3.0	99.0
Strongly Agree	1	1.0	1.0	100.0
Total	100	100.0	100.0	

Source: Author (2018)

Table 4.6f shows that the capability factors could be part of the working operational excellence model for FNBZ.

Table 4.6f: Capabilities - The operations have In possession of resources, skills, tools to achieve operational excellence. Recognition & remuneration aligned approach.

	Frequency	Percent	Valid Percent	Cumulative Percent
Neither Agree nor disagree	34	34.0	34.0	34.0
Agree	31	31.0	31.0	65.0
Strongly Agree	35	35.0	35.0	100.0
Total	100	100.0	100.0	

Source: Author (2018)

From the findings, cultural elements were viewed as not a dominant characteristic to the operations model at FNBZ as shown in Table 4.6g where the majority of the respondents 66% strongly disagreed and 13% disagreed.

Table 4.6g: Culture - The operations have A culture that enables operational excellence to thrive. Customer-centric, employee empowerment & continuous improvement

	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly disagree	66	66.0	66.0	66.0
Disagree	13	13.0	13.0	79.0
Neither Agree nor disagree	19	19.0	19.0	98.0
Agree	1	1.0	1.0	99.0
Strongly Agree	1	1.0	1.0	100.0
Total	100	100.0	100.0	

Source: Author (2018)

From the findings as depicted in Table 4.6h, the majority of the respondents (72%) did not agree or disagree to the assertion that governance was a dominant characteristic for the operations model at FNBZ. There was 16% of respondents that disagreed that it is a dominant factor whilst 9% agreed and 3% strongly agreed thereby the resultant is that the validation was weak to merit substantial significance to the operating model at FNBZ for the governance factor.

Table 4.6h: Governance - The operations at the bank have well Designed & build-in end-to-end business process governance.

	Frequency	Percent	Valid Percent	Cumulative Percent
Disagree	16	16.0	16.0	16.0
Neither Agree nor disagree	72	72.0	72.0	88.0
Agree	9	9.0	9.0	97.0
Strongly Agree	3	3.0	3.0	100.0
Total	100	100.0	100.0	

Source: Author (2018)

Table 4.6i indicates that transformation and improvement could be a key factor of the working innovative operational excellence model for FNBZ as majority of the respondents appears to agree.

Table 4.6i: Transformation and improvements - The operations at the bank have an Application of state-of -the-art tools, techniques and methods to innovate and reengineer business process to achieve radical and continuous improvement to business processes

	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly disagree	6	6.0	6.0	6.0
Disagree	10	10.0	10.0	16.0
Neither Agree nor disagree	17	17.0	17.0	33.0
Agree	36	36.0	36.0	69.0
Strongly Agree	31	31.0	31.0	100.0
Total	100	100.0	100.0	

Source: Author (2018)

The statistics in Table 4.7 indicates clearly the significant factors that are part of a working operational excellence model for FNBZ. Using the mean scores and the standard deviations, a model could be formed that can be employed by FNBZ. The factors with the mean score of less than 2.5 are irrelevant in forming a working model for operations. Factors with mean score above 2.5 are relevant to be part of the model. The factors with the higher mean above 4, could be considered as key factors that FNBZ need to focus on when implementing operational excellence. The factors are listed below:

Table 4.7: Statistics on the Characteristics of the Operations Model at FNBZ

	Vision	Ownership	Implementation Plan	Architecture	Measurement	Capabilities	Culture	Governance	Transformation and Improvements
Number Valid	100	100	100	100	100	100	100	100	100
Missing	0	0	0	0	0	0	0	0	0
Mean	2.29	3.84	1.52	1.62	1.66	4.01	1.58	2.99	1.76
Std. Deviation	.456	.636	.643	.814	.728	.835	.901	.611	1.173

Source: Author (2018)

The degree of importance of the operations characteristics are depicted in Table 4.8. the factors where rated based on mean scores. Whereby, on a scale of 1 -5, mean score of less than 2 implies not important, mean score greater than 2 and less than 4 implying important factor and a mean score above 4 implying very important.

Table 4.8: Characteristics of the Operations at FNBZ

Factor	Mean	St. Dev.	Degree of Importance
Vision	2.29	0.456	Not Important
Ownership	3.14	0.636	Important
Implementation plan	1.52	0.643	Not Important
Architecture	1.62	0.814	Not Important
Measurement	1.66	0.728	Not Important
Capability	4.01	0.835	Very Important
Culture	1.58	0.901	Not Important
Governance	2.99	0.611	Important
Transformation and Improvement	1.76	1.173	Not Important

Source: Author (2018)

Analysis of Model for Operations at FNBZ

Based on the mean scores and the standard deviations presented in Table 4.8 above, the operational model for FNBZ was found to be as in Figure 4.9 below in order of importance:

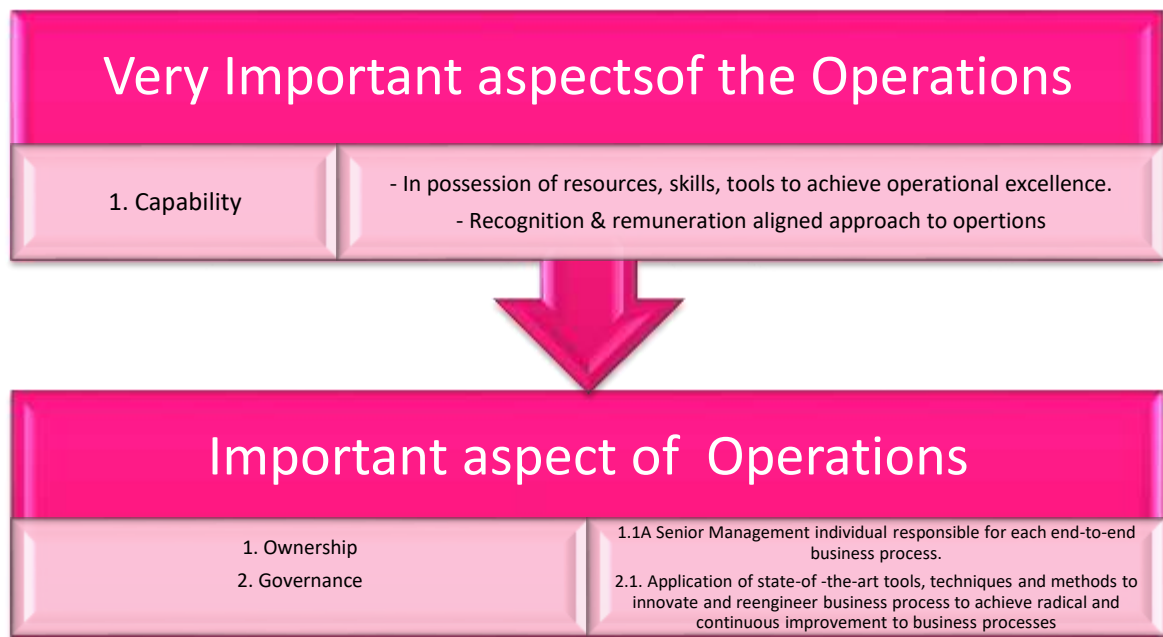


Figure 4.9: Suggested Operational Model for FNBZ

Source: Author (2018)

The limitation of the model is that not all factors that would be considered to form a working operational model were exhausted. There could be other factors that were included in the study that would form part of the working and innovative operational excellence model for FNBZ. Equally, there is a better method of model formulation than the method that has been used above. The model is called factor analysis. However, the model requires complicated software SPSS AMOS that was not available to the researcher. Despite this limitation the model developed can still be considered for boosting innovative operational excellence at FNBZ.

4.3.2 Objective 2: To Evaluate the Impact of the Current Operational Excellence Model on Organization Performance at First National Bank Zambia

The evaluation of the impact of operational excellence on organisational performance was done based on the Kobayashi and Lean Six-Sigma models. The study reviewed these models in relation to their usability and suitability and thus the main areas the models are focused on can be divided into five groups; Lowering of costs, ii) Production of high-quality products and services, iii) Accuracy and speed of execution, iv) Dependability and v) flexibility. To test the impact of the operational model on the organisational performance, the one-way Analysis of variance (ANOVA) was used as shown in Table 4.9.

The study found significant statistical evidence that the operational model of FNBZ had significant effect on flexibility of operations towards providing a service to the customers, with the significance level =0.000 where $P < 0.05$. The study also found that the operational model employed by FNBZ had statistically significant effect on dependability of the service provided by the organisation as well as the systems of the organisation with the significance level =0.001, where $p < 0.05$.

Similarly, there was significant statistical evidence that the operational model at FNBZ affected the speed with which the services were being provided by the organisation to the customers, with Significance level =0.000, where, $p < 0.05$. Table 4.9 also shows that there is statistically significant evidence the operational model at FNBZ influence the cost of doing business at the bank, Significance level=0.002, where $P < 0.05$

However, it was found out that there was no significant statistical evidence that the operational model employed by FNBZ influenced the quality of the services, with significance level =0.217, where $p > 0.05$ as shown in Table 4.9 below.

Table 4.9: One-way Analysis of Variance – ANOVA

OE Factors		Sum of Squares	df	Mean Square	F	Sig.
Lowens Costs	Between Groups	6.321	1	6.321	9.985	.002
	Within Groups	62.039	98	.633		
	Total	68.360	99			
Produce high quality products	Between Groups	.416	1	.416	1.547	.217
	Within Groups	26.334	98	.269		
	Total	26.750	99			
Faster and accurate-Speed	Between Groups	22.757	1	22.757	64.827	.000
	Within Groups	34.403	98	.351		
	Total	57.160	99			
Dependability	Between Groups	1.500	1	1.500	11.088	.001
	Within Groups	13.260	98	.135		
	Total	14.760	99			
Flexibility	Between Groups	3.556	1	3.556	15.778	.000
	Within Groups	22.084	98	.225		
	Total	25.640	99			

Source: Author (2018)

4.3.3 Objective 3: To Establish the Barriers Affecting Implementation of a Working Innovative Operational Excellence Model at First National Bank Zambia

The factors representing the barriers in Table 4.10 below were obtained from the model that was developed by OECD (1992). OECD classified the barriers to successful and effective Operational plan into 2 categories. These are 1) Internal categories, and the 2) External categories. The mean score and the standard deviation were used to rank these barriers in accordance with how much they affect the successful implementation of the Operation model at FNBZ.

Table 4.10 shows a rank of 12 factors that were considered in the research as barriers towards implementing an operational model that can be effective in affecting organisational performance. Lack of vision (mean=4.39; SD=0.777) was found to be the greatest barrier towards implementing a working and innovative operational excellence model at FNBZ. Deficiencies in Education/training of operations was also significant barrier with a mean score of 4.13; SD of 0.089. Other barriers include: Resistance to change (mean=4.03;SD=0.745), Risk-avoiding attitudes (mean=3.66;SD=1.148), Overall neglect and misuse of talents (mean=3.12;SD=0.987), Lack of motivations (mean=3.02; SD0.900) and Inadequate technologies (mean=2.97; SD=0.498)

Table 4.10: Barriers to Implementation of a Working Operational Excellence Model

SN	Factor	Sample Size	Mean	SD
1	Hierarchical & Formal Communication Structure	100	1.00	0.00
2	Conservatism and Conformity	100	1.40	0.876
3	Rigid Organizational Arrangements	100	1.74	0.895
4	Inappropriate or Lack of Government Policy	100	2.11	0.523
5	Lack of Infrastructure	100	2.15	0.999
6	Inadequate Technologies	100	2.97	0.498
7	Lack of Motivation	100	3.02	0.900
8	Overall Neglect and Misuse of Talents	100	3.12	0.987

9	Risk-Avoiding Attitudes	100	3.66	1.148
10	Resistance to Change	100	4.03	0.745
11	Deficiencies in Education/Training	100	4.13	0.089
12	Lack of Vision	100	4.39	0.777

Source: Author (2018)

The barriers were also analysed by applying the Pareto analysis as depicted in Figure 4.10 below. The findings were that 5 factors formed > 75% of the barrier magnitude. These were: lack of vision-23%, deficiency in education and training-16%, resistance to change-15%, risk-avoiding attitudes-13% and inadequate technologies-9%.

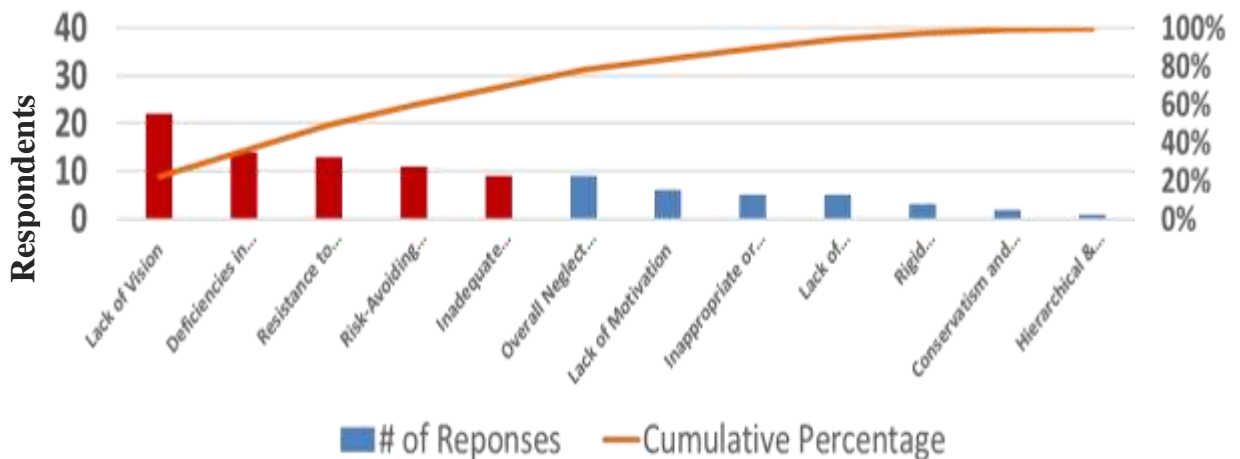


Figure 4.10: Pareto Chart of Barriers to Achieving Operational Excellence at FNBZ

Source: Author (2018)

Further from the findings, Figure 4.11 below indicates the proportion of respondents that responded to each barrier indicating which barriers were present at FNBZ and thus preventive to the implementation of an effective operational excellence model. From the respondents the top 4 barriers based on number of responses in agreement were as follows; 74% responded that lack of vision is a barrier. 72% responded that deficiencies in education/training was a barrier. 69% responded that resistance to change was a barrier and 66% responded that risk-avoidance was a barrier to implementing an effective operational excellence model at FNBZ. Other barriers as also included overall neglect and misuse of talents, inadequate technologies and lack of motivation.

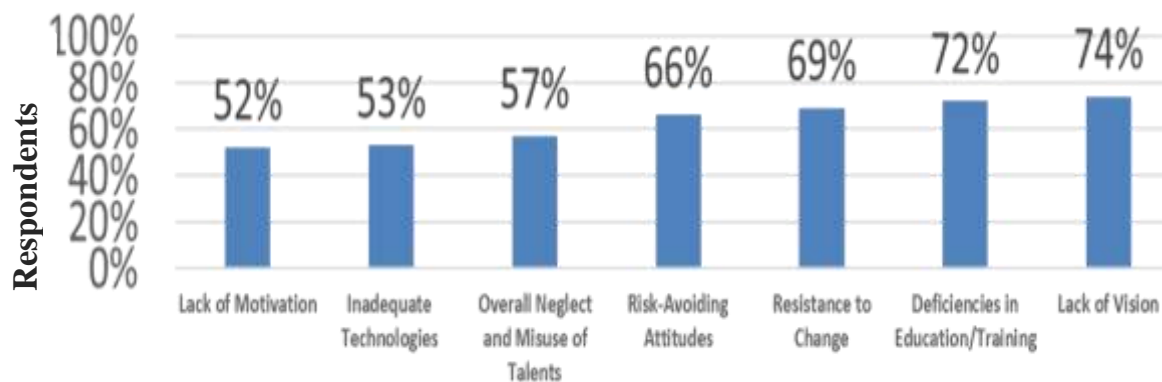


Figure 4.11: Descriptive Statistics on Respondent Results to Barriers Affecting Implementation of an Effective Operational Excellence Model *Source: Author (2018)*

4.3.4 Barriers Based On the Difference in Perception on Operations of the Bank between Management and Non-Management Employees

The difference in perception was tested by applying the t-test. The results were interpreted based on the t-score and the significance level. Table 4.11 below shows the results of the t-test.

Table 4.11: Independent Samples Test (Management vs. Non-Management employees)

		Levine's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Rate the performance of OEM of FNB	Equal variances assumed	.905	.344	.399	98	.691	.050	.125	-.199	.299
	Equal variances not assumed			.398	29.162	.693	.050	.126	-.207	.307

Source: Author (2018)

With the t-statistic of 0.399 and the Sig. (2-tailed) of 0.691, there is evidence that the difference exists between management and non-management employees on their perception towards the operations at the bank.

Chi-Square Statistical Analysis

To further validate the findings from the T-Test, the chi-square was run to establish which group had the favourable perception towards the operations than the other.

Table 4.12a below shows the statistics of the cross tabulations of category of employment against operations model performance rate at FNBZ. There were 100 respondents and none was missing.

Table 4.12a: Category of employment * Rate the performance of OEM of FNB

Cross tabulation

			Rate the performance of operations at FNBZ		Total
			Ineffective	Effective	
Category of employment	Management employees	Count	8	12	20
		% within Category of employment	40.0%	60.0%	100.0%
	Non-management employees	Count	44	36	80
		% within Category of employment	55.0%	45.0%	100.0%
Total		Count	52	48	100
		% within Category of employment	52.0%	48.0%	100.0%
		% of Total	52.0%	48.0%	100.0%

Source: Author (2018)

From the findings, Figure 4.12 indicates that 60% of management employees stated that the operations at FNBZ were effective compared to non-management employees which was at 45%. Further 55% of non-management employees stated that the operations model is ineffective compared with 40% of the management employees. The total complement of non-management and management staff resulted in 52% responding that the operations where ineffective with only 48% responding that the operations are effective.

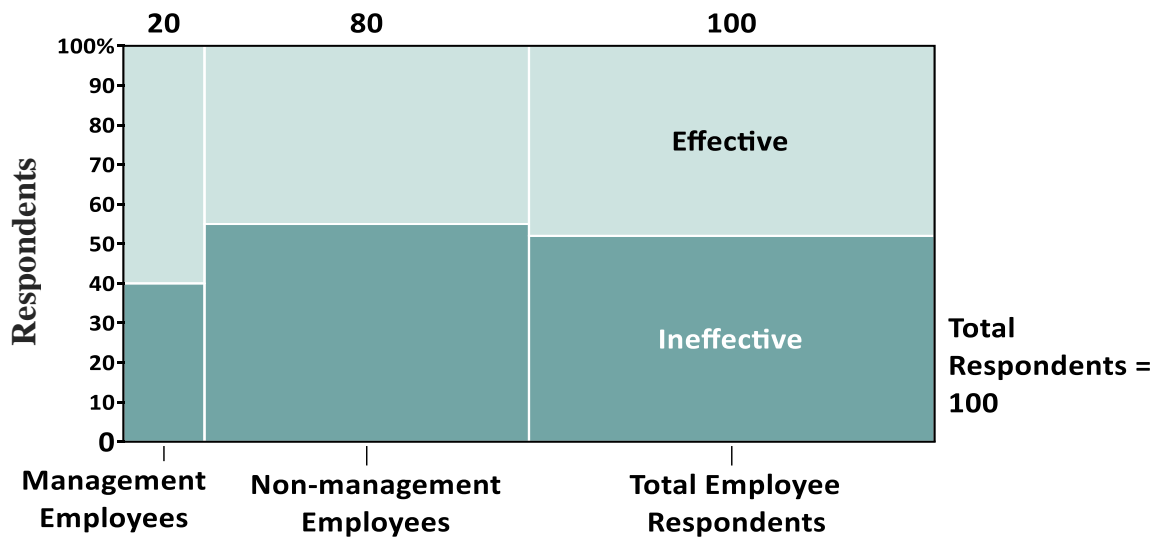


Figure 4.12 Operations Model at FNBZ rating by Category of employment

Source: Author (2018)

In order to validate the position, Table 4.12b shows some statistical evidence by applying chi square tests. Table 4.12b shows that with Pearson chi-square of 0.162, and the Asymptotic Significance (2-sided) = 0.687. These findings are similar to those of the T-test.

Table 4.12b: Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	.162	1	.687		
Continuity Correction	.023	1	.880		
Likelihood Ratio	.163	1	.686		
Fisher's Exact Test				.803	.443
Linear-by-Linear Association	.161	1	.688		
N of Valid Cases	100				

Source: Author (2018)

4.3.5 Barriers Based On the Difference in Perception on Operations of the Bank between Employees and Customers

Customer Satisfaction and the Operations Model at FNBZ

There were 9 factors that were used to measure customer satisfaction of the clients of the bank (FNBZ) as shown in Table 4.13. Table 4.13 shows that, of the 9 factors selected to measure and analyse customer satisfaction levels, 3 factors were found to be significant with the mean score of above 2.5 out of the total maximum score of 5 for each factor. This suggests that customers were satisfied on 3 factors of the operations model of the bank. These factors include; i) communication and education of new products/services mean=2.05, SD=0.730, iii) security of the environment mean =3.04, SD=0.636, and iv) digital banking services (mean 2.62; SD=0.718).

The overall mean was found to be 1.98 with the SD=0.671 suggesting that the customers were unsatisfied although the customer nonsatisfaction level was weak. It was found to be 48.83% almost average. The standard deviation shows consistence with which respondents were responding to the questions approving that the mean score of 1.98 is valid.

Table 4.13: Customer Satisfaction Levels Analysis

SN	Factor	Sample Size	Mean	Standard Deviation
1	Customer service quality	32	1.57	0.498
2	Efficiency of service	32	1.89	1.143
3	Service reliability	32	1.80	0.402
4	Communication/education of new products/services	32	2.05	0.730
5	Product service range	32	1.29	0.456
6	Security of environment	32	3.04	0.636
7	Convenience and accessibility of bank services	32	1.42	0.643
8	Digital banking services	32	2.62	0.814
9	Tariff and rates	32	1.90	0.718
Total Mean			1.98	0.671

Source: Author (2018)

To validate the results further, a t-test was carried out. Table 4.14 below describes the findings based on the T-test done. Table 4.14 presents the T-test analysis that was done to test the validity that there is no difference in perception between employees and customers towards the operations model used at FNBZ. Table 4.14 shows that the significance (2 tailed) = 0.00 which is less than the p value 0.05 suggesting that there is a statistically significant difference in perception between employees and customers towards the operations model employed by FNBZ.

Table 4.14: Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Perception of the operations	Equal variances assumed	9.169	.003	-10.790	77	.000	-1.121	.104	-1.328	-.914
	Equal variances not assumed			-24.438	65.000	.000	-1.121	.046	-1.213	-1.030

Source: Author (2018)

4.3.6 Content Analysis – Results of Interview Sessions

The researcher conducted interviews in order to validate finding and to collect qualitative data. The guided interview sessions aimed at answering research questions and therefore validating the results of the descriptive and inferential quantitative data analysis. The Table 4.15 below shows the results.

Table 4.15 Content Analysis of Interviews with Management and Non-Management Staff

Meaning Unit	Code	Category
<ul style="list-style-type: none"> • We do measure Profitability and customer numbers • Our focus is mainly the financials and customer growth as we would like to have over 30000 of them • The performance is squarely hedged on financial data and how we can reduce costs • We measure in terms asset growth and cost-to-benefit ratios 	Dimensions of performance measurement (n=4)	Organisational performance
<ul style="list-style-type: none"> • We do measure Profitability and customer numbers • Our focus is mainly the financials and customer growth as we would like to have over 30000 of them • The performance is squarely hedged on financial data and how we can reduce costs • We measure in terms asset growth and cost-to-benefit ratios; 	Financial performance (n= 4)	Organisational performance
<ul style="list-style-type: none"> • We do measure Profitability and customer numbers • Our focus is mainly the financials and customer growth as we would like to have over 30000 of them • The performance is squarely hedged on financial data and how we can reduce costs • We measure in terms asset growth and cost-to-benefit ratios 	Customer performance (n= 4)	Organisational performance
<ul style="list-style-type: none"> • Well as in all industry we have to look at the human capital as well... do we have the right people in roles to do the best work • We train resources but we have not fully come to grips on how we can measure the value from this so we are trying to include it in the KPIs 	People performance (n=2)	Organisational performance
<ul style="list-style-type: none"> • We hardly measure processes in terms of the costs, turnaround times and people usage. This is a gap we are looking into 	Process performance (n=1)	Organisational performance
<ul style="list-style-type: none"> • We measure financials, customer growth and assets growth • The business focuses on growth in the segments we service • Each unit has set targets for customer acquisitions , deposits, NIR and Assets making • I think the key is for us to look at it holistically, we have done well in 	Targets for measurement (n=4)	Organisational performance

maintaining customer growth but are they quality customers when our revenue has shrunk so those are our focus areas		
<ul style="list-style-type: none"> • I think our operations are intrinsically tied to our performance. Just look at the losses incurred due to bad assets caused by not looking at the process thoroughly • That is a fact as it is core to the function of the bank • Operations is pivotal as it also speaks into customer service hence it drives our numbers • Serving customers has always been our focus and key to this is the back office team in ops doing their work efficiently • We can talk of revenue but all that erodes if your processes are weak and easily break. • The bank has a special need to maintain processes as these are what create advantage for ourselves and this has been lacking to a great extent. If we can reduce non-value add activities we should see growth in profitability and more ... we can do more with less. 	influence of operations model on performance (n=6)	Organisational performance
<ul style="list-style-type: none"> • We need to realign efforts in sales, operations and marketing as well as Business intelligence to inform us • I think we need to engage to drive process redesign firstly, get everyone on board and create a culture to always see things differently • Innovation will always be a part of what we stand for and so doing we need to find ways of getting it out first, getting it out right and doing this all the time. • Well banking has changed and is more digital, and we are the market leaders here in Zambia. our key focus on a strategic front is to create better digital experiences and reduce costs greatly 	Strategic improvement (n=4)	Organisational performance Improvement

Source: Author (2018)

The researcher adopted the factors from the operations model for financial institutions as espoused by Noble (2008) this identified a number of factors including: i) Vision, ii) Ownership, iii) Implementation Plan, iv) Architecture, v) Measurement, vi) Capabilities, vii) Culture, viii) Governance and ix) Transformation and Improvement. Noble (2008) further stated that the adoption of such a framework by financial services companies is designed to instil a deeper culture of excellence and a common discipline of process management across the organization, all of which are targeted to drive greater consistency in customer experience, as well as in operating efficiency and effectiveness, and in the management of risk. The study adopted this approach to identify and describe the dominate factors of the operations at FNBZ.

Based on this and comparison to the results of the data presented, the study found that operational excellence was not fully applied at First National Bank Zambia though there was evidence that the bank recognised the need and had made efforts to improve the situation. From the study it was also established that the efforts made where more reactive than proactive to the status quo and hence implementing an operational excellence model was to a moderate extent.

The study also analysis the impact of operations on organisational performance at FNBZ. The one-way ANOVA was used to establish whether the operational model used by FNBZ affects the performance of the organization. According to Kobayashi (1995) and the Lean Six-Sigma model, the working operational model needs to bring costs of doing business down, produce high quality goods and services, must be fast and accurate, must be dependable and must be flexible. Respondents were asked to rate the effectiveness of the operational model of FNBZ by analyzing statements which they responded to across a range of possible responses from strongly disagree to strongly agree on a 5-point Likert scale. They were also asked to rate the performance of the organization from very effective to very ineffective on a 5-point Likert scale. The ANOVA analysis in Table 4.9 was based on the dependent variable which was performance of the organization against the five independent variables – i) cost, ii) quality, iii) speed, iv) dependability and v) flexibility. It was therefore concluded that operations model has a significant impact on the organizational performance at FNBZ.

Furthermore, as a consequential barrier to operational excellence, employees were not fully educated and communicated on how operational excellence would make operations of the organisation more efficient and effective. This was to a great extent. These findings resonate closely with the findings on the study of organizational performance improvement in an oil manufacturing facility in Nigeria through operational excellence (Ifeanyichukwu, 2010). The empirical study was reviewed by the researcher and its finding pointed out that efforts to minimising costs by reducing training and education had a negative impact on achieving organisational performance improvement through operational excellence at the manufacturing facility.

The study found to a great extent that not all the customers' transactions were processed efficiently without waiting. This was the practice that had been applied in the bank's operations to a great extent. The study also found that over 37% of transactions are not processed efficiently with prolonged waiting from the customers. This is an important discovery of how the Bank's operations impact on overall performance at First National Bank Zambia.

The study also established that operational excellence impacts the organisational performance of the bank to a great extent and that application of an operations excellence strategy including technologies can be used to attain the competitive objectives of customer focus, knowledge and process management, factual approach to decision making and supplier quality management.

Finally, resulting from document and business report analysis, as well as interview sessions, the study established that organisational performance of the bank was based mainly on financial performance and customer satisfaction neglecting a viewpoint of process capabilities and performance levels as well as strategic human resource development and organisational learning. To this end the bank had a notable high employee turnover of 8% compared to industry average of 6.5% during the period of investigation which meant that invaluable knowledge and operational excellence core competency was lost at great cost which also impacted on the overall financial performance.

4.4 Chapter Summary

This chapter presented the empirical results obtained from the data collection methods applied to the research - questionnaire survey, document/report analysis and interviews. It also provided the primary data analysis. The data collected was analyzed by applying univariate data analysis based on t-tests, Chi-square testing as well as the use of ANOVA. To further validate the results, the researcher applied qualitative data analysis by employing content analysis based on the interviews carried out with key respondents as the data collection mechanism. Additionally, these results provided answers to the research questions through which objectives were met. The next chapter presents in-depth discussions on what can be concluded from the study followed by recommendations for solutions and a discussion on future research work that may be carried out.

CHAPTER FIVE

CONCLUSION AND RECOMMENDATIONS

3.4 Introduction

The previous chapter presented the results and analysis of the research questionnaire scores and interviews. This chapter draws conclusions on the research carried out and provides recommendations and future research topics resulting from the study.

In addition, the design of the recommended solution and the implementation tasks that need to be addressed are discussed in order to give detail of the practicality of the recommendation within the context of the organization under study.

5.2 Summary of Research Findings

While the benefits of achieving Operational Excellence abound, there exist challenges which must be considered in its pursuit at FNBZ. The Study established that the following need to be addressed for FNBZ to effectively implement an operational excellence model that would result in sustainable organisational performance improvement.

a. Cultural Change Dynamics: Operational excellence is truly a transformation of culture, and a culture change usually meets with resistance. FNBZ has implementing pan-bank projects that imply some sort of change without notable difficulty. To improve this phenomenon, implies that change only be achieved when the people involved see real value in changing the way work is executed.

b. Ineffective Deployment of the Right Talent: The failure of an Operational Excellence effort may result from people leading the initiative lacking the required training, skills and knowledge. Initiatives must be driven by people who are well trained or certified like the black belts and greenbelts in the case of Six Sigma. They can either be hired externally or develop internally. FNBZ currently has on record no resources trained at Six Sigma Black Belt level. Further, the human resources involved are concentrated heavily on non-value add process activities thus significantly impacting negatively on the bottom line.

c. Operational Silos of Support and Business Functions: This represents the single greatest obstacle to allowing a holistic view of operations across processes and throughout the enterprise and thus, to achieving operational excellence. The resulting poor visibility applies not just to the lack of visibility of operational activities across the value chain, but to the lack of visibility of the strategy as well as performance. Without visibility, the organization cannot react to change quickly enough. Long term planning is impaired as well. Furthermore, the silo approach to work operations by the various sections of the organisation augments and extends the gaps to the situation which has created inefficiencies in service delivery and led to weaker customer intimacy - reduced customer satisfaction, inability to meet need first time and customer churn rate increases - that correlate to negatively impact organisational performance at FNBZ.

d. Inefficiencies in Execution: when the strategic vision which is to be implemented at the tactical level through one or more competencies is not effectively executed, this hampers the pursuit of Operational Excellence. This is also referred to as the lack of an execution culture.

e. Compliance and Risk Management: This is another problem area that impedes operational excellence at FNBZ. To a greater extent there are manual controls to monitor losses, Know-Your-Customers (KYC) compliance and the status of bad debts. As such employees and customers may knowingly be committing violations, or suffering from product quality of safety issues. This can lead to complaints, regulator investigations and high added costs of warranty or compensation claims and penalties.

f. Reactive Operational Mode: this, along with resource constraints, impairs Operational Excellence. FNBZ focus on day-to-day operations to the exclusion of the long-term strategic view. Management in a bid to survive the business has a reactive rather than a proactive approach to improvement and innovation. The attitude and ways are exacerbated by the lack of tools, resources or skills. The result is a lack of competitiveness that translates into weaker performance against industry peers.

g. Lack of Properly Defined Governance of Innovations Design and Development Processes. The organisation has brought about innovations that have not been successful

mainly due to an ineffective and inefficient process of innovation development and operationalization which has resulted in negative returns on investments.

h. Lack of Automation of Key Non-Value-Add Activities. The major cause of the high occurrence of operational losses is that operations are heavily manual and/or the process being inherently inefficient and costly.

5.3 Conclusion

Resultant from the data collection and analysis, it is evident that business strategies for FNBZ tend to maintain importance on capabilities, governance and ownership which are only 3 of the 9 critical success factors for an operations model for a financial services firm according to Noble's framework. However, though capability is a dominant factor there is a low ability to innovation capacity and innovativeness as a result of the missed opportunities with regards to the misalignment of operations model and innovation. This is also dependent on the implementation and architecture factors which in the current operations model are not dominant. For most part, as strategy is articulated via its supporting portfolio of programs and projects, attention to where evolution or significant change is needed is a key factor for success. Furthermore, the outcomes indicating as to where the commercial bank is drastically underperforming from an operations standpoint highlights the intrinsic need for operational excellence and thus by clearly forming an integrated strategy, FNBZ has potential to achieve improved organisational performance.

It was also clear from the findings that the exact overall strategy of the FNBZ was not effectively communicated to all employees and thus was not fully understood as there is complete misalignment in perception between management and non-management staff concerning the effectiveness of the operations model. This resulted in even more deficiencies in how operations were carried out and consequently adversely affected the bank's overall performance. Therefore, as part of a robust and effective operational excellence strategy is to implement and enforce an effective communications programme both vertically and horizontally across the organization.

The study also reviewed literature of the different models available and how best they can be applied. Companies can use different management tools and methodologies for continuous improvement to achieve strategic goals and increase organizational efficiency

through the enhanced speed of learning, innovation and process and quality improvements. Although many companies are satisfied with early results of the improvement, the continuous improvement approach requires a constant and long-term engagement to reach a sustainable growth. The implementation of a key operational excellence strategy is an excellent start for the reorganization of the entire FNBZ as it is a company-wide process that creates a culture of sustained improvement that results in a balanced organisational performance improvement. This further allows the bank to make a systematic improvement based on its strength.

It is therefore evident that operational excellence is a key strategic capability needed for FNBZ to achieve organisational performance improvement and without this approach the bank will continue to incur losses and a stunted or lacklustre performance.

Furthermore, the study has conclusively validated the positive correlation and significant impact of operational excellence on sustainable organisational performance. The study also met its objectives by answering the research questions as discussed in chapter 4.

5.4 Recommendations

As key, the bank must endeavour to plan and implement as part of the operational excellence framework strategy; a data management framework as a subset to govern the management, physical and cyber security, ensure integrity and the acceptable use, operations and accessibility of the bank's data assets. This effectively aligns to the need to intrinsically adopt as part of the operational excellence goals, objectives and strategy, digital transformation of the bank in its core operations. As such, there is need to identify and enable five domains that must be addressed for a successful Digital Transformation which include: Business Model, Approach to Innovation, Technology Model, Client Engagement, and Culture & Organization. Even though they are presented separately, they are all intertwined in such a way that a successful Digital Transformation cannot be achieved if one or more domains are not effectively and holistically developed.

Further, the need for the alignment of the Operational Excellence strategy to the corporate level strategy. This also means that the Operational Excellence strategy should be implemented across all functional areas of the Bank thus eliminating the negative impact on organisational performance of functional and/or sectional silos.

Further, as the bank operates in a dynamic environment there should be a deliberate approach to lean thinking and systems thinking. Lean thinking refers to a management approach which entails application of the five principles of Lean. It is said to be a brilliant approach to producing Operational Excellence in organizations because it creates and meets organizational objectives by eliminating waste in all forms. Systems thinking enables the organisation to be aware of its environment and to understand how things work by going beyond events to reveal the interrelationship of components that are responsible for the pattern of behaviour of an event. It goes beyond ways of correcting a problem by further seeking ways to prevent the recurrence of such a problem. These two thinking philosophies combined commit the organisation to a sustainable operational excellence strategy that results in sustained organisational performance.

Other recommendations are that the organisation must:

- i. Increase operational excellence literacy amongst key players and strengthen implementation efforts.
- ii. Build the institutional capacity of compliance and business intelligence support functions at FNBZ to carry out self-assessments of the development and management of the operational excellence framework;
- iii. Undertake programmes to modernize structures, functions, and operations of the bank to respond with agility to changing requirements that enhance and sustain operational excellence;
- iv. Promote the development and implementation of bank-specific operations strategic plans with key focus on sustainable operational excellence through application of technologies;
- v. Enhance corporate governance of the bank through the provision of an effective operational excellence framework
- vi. Set benchmarks for evaluating operational excellence and align to Key Performance Indicators (KPIs) across the bank.
- vii. Deliberate investment in the automation and/or digitalisation of business processes with specific application of Artificial Intelligence (AI) and Big Data analytics to understand customer needs, design products and service customer more efficiently and effectively.

Primary Objective: To Construct an Innovative Operations Excellence Strategic Model that will achieve Sustainable Organizational Performance Improvement for First National Bank Zambia.

5.5.1 Design of the Operational Excellence Strategy

The strategy for the Operational Excellence model must be agile to accommodate change efficiently and effectively. The key to achieving operational efficiency is for bank management to focus and simplify processes. The strategy must be implemented on technology, principles, themes, processes and with the right talent trained in leadership, change management, strategy management, strategic human resourcing, technology, business analytics and process innovation and management. The operational excellence strategy model implementation should result in a business management system that encourages process innovations so that the organization's key performance indicators (KPIs) are achieved. These KPIs are the basis for the organisational performance measurement and thus are the resultant of the operational excellence strategy adopted and implemented at FNBZ.

Figure 5.1 below illustrates the recommended strategic operational excellence framework that needs to be adopted to achieve sustainable organisational performance.

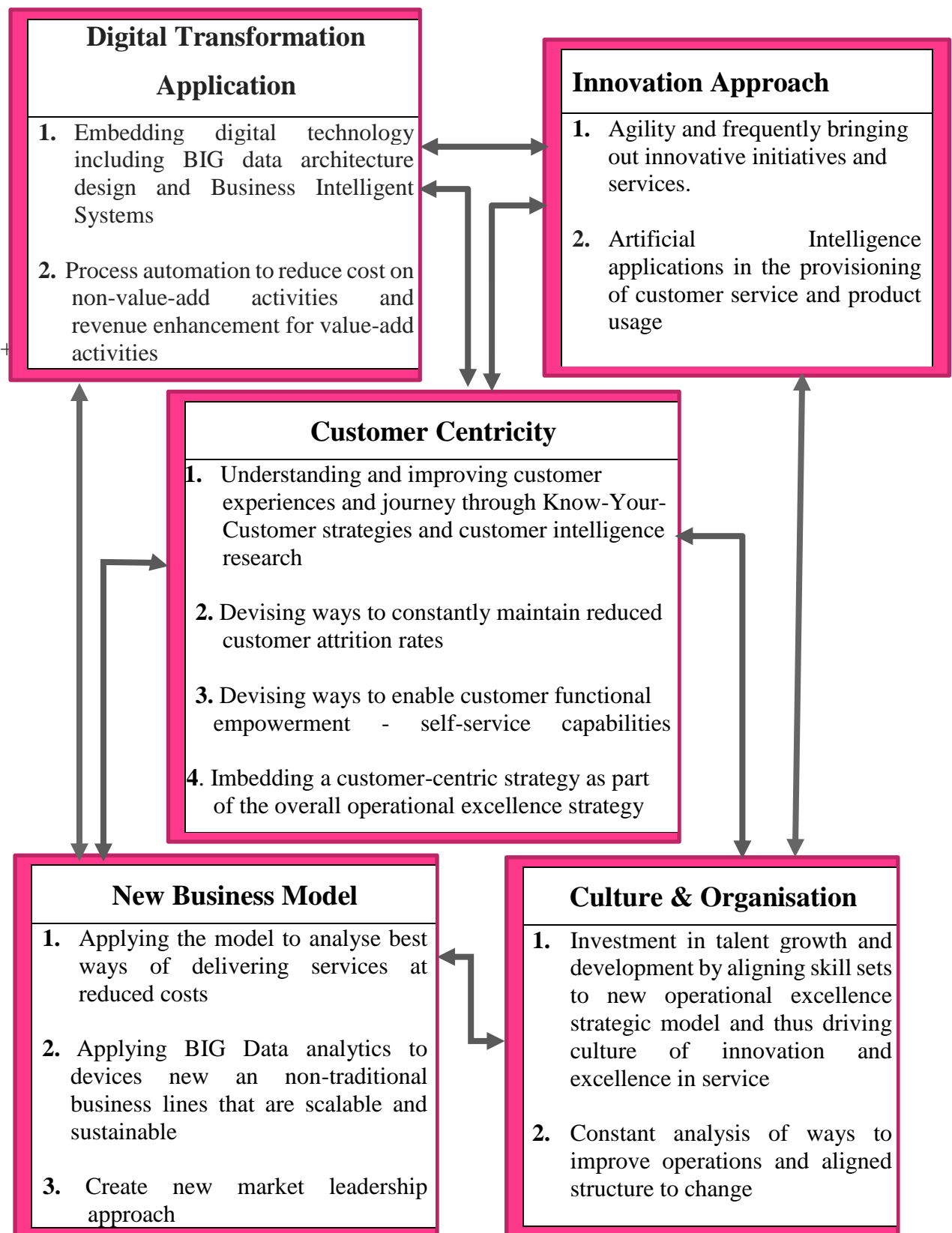


Figure 5.1: Operational Excellence Strategic Model Framework Source: (Author, 2018)

The recommended strategy design for the operational excellence model to be adopted at FNBZ, based on the conceptual framework as stated in chapter 2 –section 2.7, must have as part of its structural makeup a strategic functional unit that aims to drive excellence as its core focus and business objective – Centre of Excellence functional unit. Placed on this functional unit, is the overarching objective to improve and sustain organizational performance improvement with added responsibility of working with key stakeholder functions to encompass:

- Strategic Human Resourcing and Organizational Development
- Revenue and Value-Add Process Design and Development
- Cost-efficiency and Non-Value-Add Process Design and Development
- Operational Risk and Compliance Design and Development
- Innovations for Business Sustainability and Development
- Overall bank strategy envisioning, formulation, analysis, implementation and management.

Figure 5.2 below illustrates the recommended organogram for the operational excellence model to be effective at FNBZ with key emphasis on the Centre of Excellence functional unit.

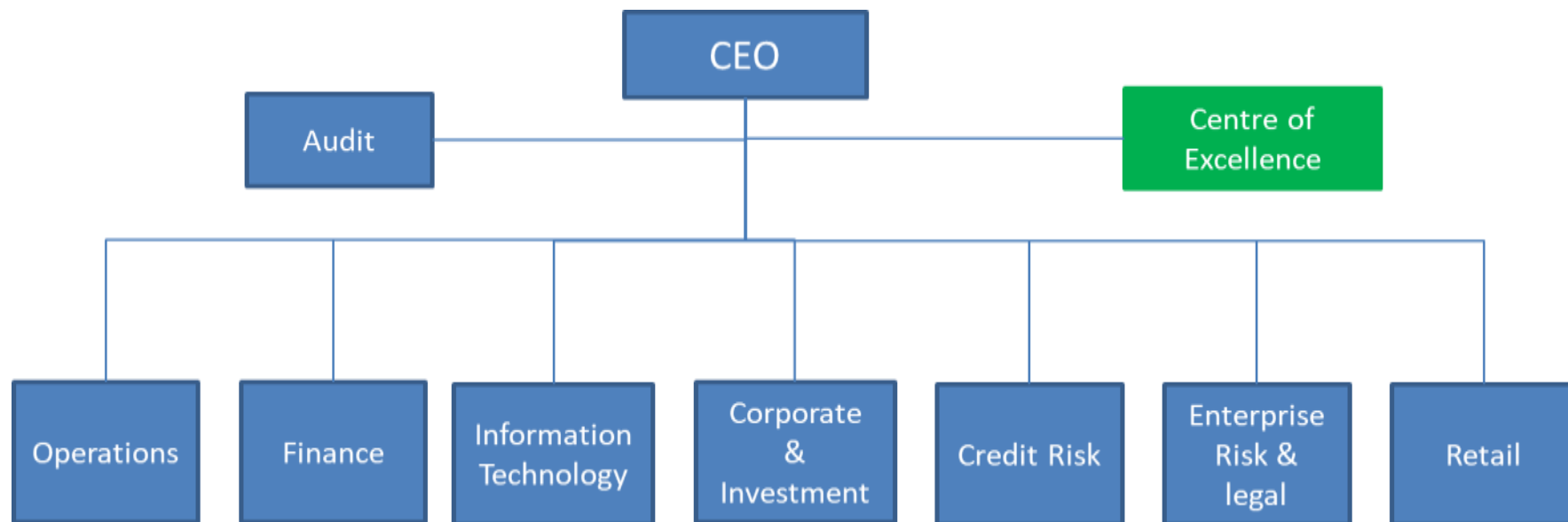


Figure 5.2 – Proposed Organogram for FNBZ

Source: Author (2018)

5.5.2 Measurement of Operational Excellence Strategy

The assessment required against the current non-existent Operational Excellence criteria for FNBZ (e.g., high performance culture, methods and instruments, employee empowerment) is defined to support FNBZ to achieve strategic competitive advantage and sustainability in terms of organizational performance.

To support a methodical integration of Operational Excellence at FNBZ, an assessment framework has to be designed and developed. The model design containing the identification of relevant criteria and their cause-effect relationships is a key element to achieve the strategic goal. Due to the fact that external assessment is costly and can be inaccurate due to the lack of in depth knowledge of the organization by external assessors, a more detailed and accurate, self-assessment of FNBZ's Operational Excellence strategy implementation and operationalization internally is cost effective and accurate if performed with complete tools which assesses all four dimensions of the bank's balanced score card: i) people, ii) customers, iii) processes and iv) financials.

The key focus of the assessment should be the ability to tailor the framework to the current and future needs of the bank. Further, it must establish the current state of affairs as concerned with the organization's performance. Once the current state and desired end state have been established, the next phase is to conduct a gap analysis, identifying the necessary projects in each dimension of measurement of operational excellence required to close the gap between current and the desired end state. The resultant should be a roadmap to prioritize projects and initiatives.

Thus, the self-assessment tool must focus on:

- Dimensions to be assessed based on the balanced score card,
- Baseline and Scoring criteria for each dimension and /or sub-dimensions
- Usability of the assessment tool and its resulting information for predictive, descriptive and historical analysis

Performing assessments must serve as a reality check for the bank while highlighting the weaknesses and strengths on which it can build upon to achieve Operational Excellence to impact sustainable organisational performance. Table 5.1 below depicts the high-level measurements criteria and sub-dimensions based on the main four balanced score card dimensions for FNBZ.

Table 5.1 – Operational Excellence Measurement Tool Criteria

Dimension	Sub-dimension	Weight	Scoring Criteria
Financial		30%	
	Revenue		Growth by 5% YoY
	Cost-income-ratio		Stable at 55%
	Operating profit		Growth by 10% YoY
	Direct expenditure		Reduce by 2% YoY
	Indirect expenditure		Reduce by 2 % YoY
People		20%	
	Employee Net Promoter Score (ENPS)		Growth by 5% YoY
	Turnover ratio		Below 5%
	Skills ratio by operations category		Above 75% (75 % of employees must have the basic skill required in each active job role)
	Leadership competency		ENPS > 70%
	Culture and values		Employees to live 100% values
	Absenteeism level		Below 5% of overall work time
	Leave days management rate		Average below 12 days/employee
Process		30%	
	Value-add process ratio		Above 60%
	Average Turn-around time consistency per process group		Above 80%
	Rework percentage		Below 10%
	Process innovation ratio		40%
Customer		20%	
	Customer Net Promoter Score (CNPS)		50-90%
	Product and service usage ratio		90% of customer base
	Customer churn rate		Less than 5%
	Average non-interest revenue per customer		K150/month – per retail customer K220/month – per SME and Agric customer K10,000/month – per Public sector customer K50,000. month – per Corporate customer
	New customer acquisitions rate		10% MoM growth

Source: Author (2018)

5.5.3 Implementation Plan of the Operational Excellence Strategy

The framework does not require a “big-bang” simultaneous implementation everywhere in the organisation, but can be rolled out sequentially across each division, provided that this is effected to the established common standard. The Bank therefore does not suddenly appear on the Operational Excellence radar overnight. Instead, constant and consistent progress over a set and targeted period of time with clearly marked milestone and check points planned to assess the depth and effectiveness of the operational excellence application is generally necessary before it becomes evident that the Bank is genuinely dedicated to this pursuit.

Full implementation of the framework will require significant behavioural change across the whole organisation, and will involve representatives throughout the bank, in order to achieve the desired common approach. This will therefore require full sponsorship at an appropriate senior level of executive management, governance through a Steering Committee with representatives from each division, and ownership by a central team that seeks approval through the Steering Committee.

The initial timelines for start to finish need to be set out from the beginning. These can be reviewed at different stages and new dates stated given the dynamic conditions prevailing in the business environment that may affect plans. Such changes are presented to the steering committee for approval. The major sign-off points include:

- 1) Business Case sign-off** – prior to engagement with the solution, the business through an appropriate senior management member must present a case for business. This must include:
 - i. Financial benefits** to be realised once the operational excellence model is implemented and briefly how this will be sustained over time.
 - ii. The organisational learning benefits** – a description of measurable skillsets that will be impacted for the organisation and a change in the way the organisation will do things.
 - iii. Customer impact benefits**– Clearly defined customer key measurement metrics such as Customer Net-Promoter Score (CNPS), service/product usage baselines and benchmarks, customer acquisitions, customer retention rate.

- iv. **Process performance and coherence benefits** – this includes: cost-efficiency in processes, process innovation to enhance customer value proposition, process continuous reengineering to reduce waste, process risk management.
- v. **Risks identified and mitigates to put in place.** This will also describe the estimated risk occurrence and impact to the business.

2) Steering Committee Formation and Approval

Following successful approval of the business case, a steering committee must be set up and approved by the board of the bank. This is also in line with sound corporate governance procedure such that there is proper representation of the bank through the steering committee and the board maintains overall oversight duties.

3) Programme Charter Sign-Off

The Steering Committee is tasked with the approval of the Programme charter and the enforcer of the proper governance structures.

4) Operational Excellence Implementation Team Formation and Approval

The Steering Committee is tasked with the approval of the Implementation Team and the enforcer of the required level service delivery. The implementation team is tasked with interpreting the corporate strategy and translating it to the operational excellence strategy including recommendations for necessary training of resources, assigning resources to activities, analysis of outcomes, monitoring and control of activities, stakeholder management, devising functional level plans and reporting into the Steering Committee on the status of the implementation. Furthermore, the team is mandated to provide excellence through innovating ways of doing things and should be the centre of transformation and innovation for the bank.

5) Resource Training for Operational Excellence

The key ingredient to implementing the operational excellence strategic model is training key resources to be specialised. The strategic human resources require training on the usage of Operational Excellence methods and tools that result in the sustainable improvement of key performance metrics (KPIs) of the organisation. These include training in Business Process Management (BPM), Lean Six Sigma (LSS) and project management.

- Lean Six Sigma Training - Green and Black Belt Six Sigma Certification
- Project Management Training- Project Management Professional Certification
- Business Process Management Training - Certified Business Process Professional (CBPP) training

6) Operationalization of Change

To operationalize the new operational model means that change management needs to take effect not only in processes but also in organisational structure.

7) Continuous Scheduled Implementation Reviews

This can be viewed as a strategic tool. The scheduled reviews are key to addressing the need for continuous improvement on operational excellence and are thus meant to institutionalise the culture of agile continuous improvement and innovation across the bank which has the effect of yielding sustained organisational performance improvement.

The agile approach will enable the breakdown of the larger strategic operational excellence implementation into small, manageable chunks called iterations. At the end of each iteration (which generally takes place over a consistent time interval) something of value is produced. The product produced during each iteration should be able to be put into the organisation to gain feedback from stakeholders. The agile process promotes sustainable development and simplicity to implementation and will be key to the underlying technology and digital transformation at FNBZ. Figure 5.2 illustrates the agile philosophical approach to the implementation of the innovative strategic operational excellence model.

Agile Process Steps Descriptions

1. Define requirements – the process of requirements elicitation

2. User Interface (UI) Design – the process of designing the user interfaces which also encompasses system thinking around user experience.

3. Development – codification and software development and based on modular and micro services approach

4. Quality Assurance (QA) – this involves system and unit level testing as well as integration tests to ensure that development modules are compatible.

5.User-acceptance Testing (UAT) – testing the functionality of the developed work to certify that it is the right product that functions according to the requirements.

6.Client feedback – this include necessary sign-offs from sponsor or funders of the project.

7.Release – a decision as to when the signed-off module can be implemented into the production system.

8.Post-implementation Change requests (CR) - incorporation of feedback from the client's customers. This effectively restarts the process.

Figure 5.3 illustrates the agile approach to implementing the operational excellence model.

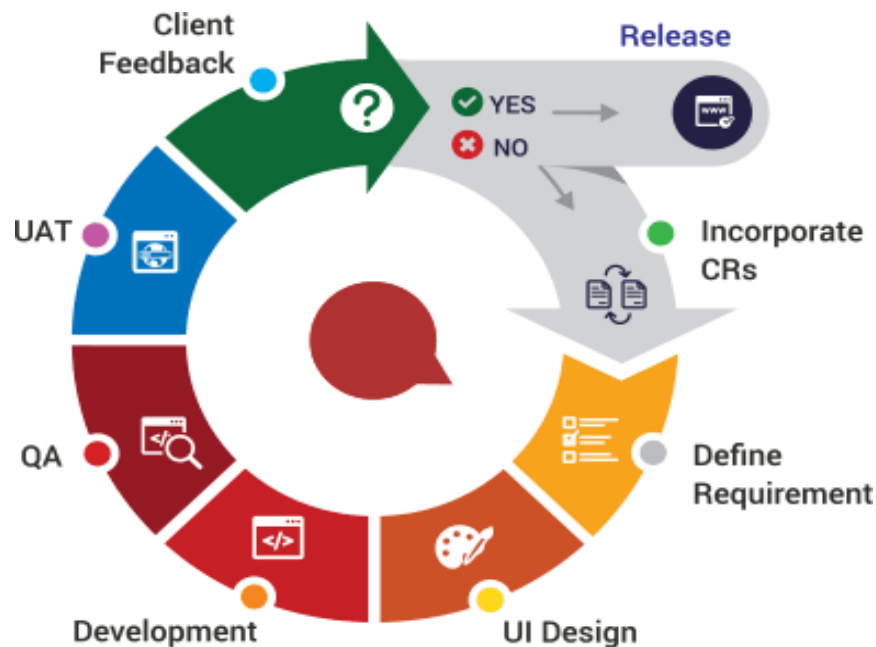


Figure 5.3: Agile Approach to the Operational Excellence Strategy Implementation

Source: Shore and Warden (2007, p.107)

Further, part of the scheduled implementation reviews is to focus more closely at the identified, occurred and or recurring risks; how they are to be mitigated and assignment of each risk to a risk owner. This is to keep track of risks that might have significant impact and should be part of Business-as-usual for an organisation executing operational excellence from a strategic viewpoint.

5.5 Areas for Further Studies

The study explored the impact of operational excellence on the organizational performance of First National Bank Zambia in the Zambian Commercial Banking Sector, the study recommends that; Similar studies should be done in other countries where First National Bank has subsidiaries for comparison purposes and to allow for generalization of findings on the influence of operations on the performance of the banking Group.

Furthermore, there should be a study to encompass the operational modes of commercial banks in Zambia with the intent to assess and define as to what should constitute the best practices, standards, guidelines and assessment criteria to evaluate the degree of implementation of operational excellence in the Zambian banking sector. This study could be used as an important reference point and baseline what should constitute best practice for the Zambian market.

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APPENDICES

APPENDIX I: QUESTIONNAIRE - EMPLOYEES

My name is Chipwatanga Timothy,

I am a student at University of Zambia. I am conducting research on the subject of “Impact of Operational Excellence on Organisational Performance: A Case Study of First National Bank Zambia”. This research is for academic purpose and it will be treated with the confidentiality it deserves.

Instructions: *(Please read the instructions given and answer the questions as appropriately as possible).* It is advisable that you answer or fill in each section as provided. Make an attempt to answer every question fully and honestly.

I thank you in Advance

Yours Chipwatanga T.

Bio- demographic data (please circle as appropriate)

1. Age of the respondent.....
2. Sex of the respondent
 - a. Male
 - b. Female
3. Job position of the respondent
 - a. Senior management
 - b. Middle management
4. Education of the respondent
 - a. Diploma and below
 - b. Bachelor's degree
 - c. Professional qualification
 - d. Masters and above
5. Number of years worked for the respondent
 - a. One year and below
 - b. Above one year but below three years
 - c. Three years to five years
 - d. Above five years

Section 1: To Establish the Operations Model Employed FNBZ

6. The Table below shows the aspect of an innovative working operational excellence model for financial institutions developed by Noble (2008). Kindly select any of the five options from strongly agree to strongly disagree regarding the extent to which the operations model at FNBZ contains these features. *(please tick the most appropriate response)*

SN	Factor	Strongly disagree	disagree	Agree nor disagree	agree	Strongly agree
A	PROCESS LEADERSHIP					
1	Vision: At FNBZ there is a defined vision for each end-to-end business process aligns					

	to the business strategy. Define end state performance levels - Cost; Risk, Speed; Accuracy					
3	Ownership: At FNBZ a Senior Management individual is responsible for each end-to-end business process					
4	Implementation Plan: At FNBZ there is a well thought out plan to implement the operational excellence vision i.e. agreed timeframe for implementation, continuous alignment and review					
B	Process Knowledge					
1	Architecture: At FNBZ there is an understanding of each end-to-end business process and how they all fit together i.e. defined business process end-to-end linkages					
2	Measurement: At FNBZ there is end-to-					

	end customer-oriented process measurements. Aligned to Voice of Customer (VOC)					
3	Capabilities: At FNBZ there is adequate provision of resources, skills, tools to achieve operational excellence. Recognition & remuneration aligned approach					
C	PROCESS EXECUTION					
1	Culture: At FNBZ there is a culture that enables operational excellence to thrive. Customer-centric, employee empowerment & continuous improvement					
2	Governance: At FNBZ there is designed & build-in end-to-end business process governance. Change management controls in business process management					
3	Transformation & Improvement: At					

	FNBZ there is application of state-of - the-art tools, techniques and methods to innovate and reengineer business process to achieve radical and continuous improvement to business processes					
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Section 2: Impact of Operations Excellence model on FNBZ performance

The Operations model that works will be able to minimize the cost of doing business, improve the quality of a service, will be flexible and deliver the service within the acceptable time period. Kindly respond to the statements that follow by circling the most appropriate answer in relation to the extent the operation model achieves these objectives.

7. The operations model allows operating at **low cost**?
 - a. Strongly disagree
 - b. Disagree
 - c. Neither agree nor disagree
 - d. Agree
 - e. Strongly agree
8. The operations model allows producing services of high **Quality**?
 - a. Strongly disagree
 - b. Disagree
 - c. Neither agree nor disagree
 - d. Agree
 - e. Strongly agree
9. The operations model at FNB allows providing a **service faster and accurately – speed**?

- a. Strongly disagree
 - b. Disagree
 - c. Neither agree nor disagree
 - d. Agree
 - e. Strongly agree
10. The operations model at FNB is very **dependable**?
- a. Strongly disagree
 - b. Disagree
 - c. Neither agree nor disagree
 - d. Agree
 - e. Strongly agree
11. The operations model at FNBZ is **flexible** - The ability to change the volume of production, the ability to change the time taken to produce, the ability to change the mix of different products or services produced, the ability to innovate and introduce new products and services.?
- a. Strongly disagree
 - b. Disagree
 - c. Neither agree nor disagree
 - d. Agree
 - e. Strongly agree
12. How would you rate the performance of the performance of the operations excellence model of FNBZ?
- a. Very weak
 - b. Weak
 - c. Average
 - d. Effective
 - e. Very effective

Section 3: Internal and External Barriers to Implementation of operational excellence model. *(Please circle the most appropriate response)*

The external barriers include

13. Inadequate technologies are a barrier to an innovative operations excellence at FNBZ

- a. Strongly disagree
- b. Disagree
- c. Neither agree nor disagree
- d. Agree
- e. Strongly agree

14. Deficiencies in education and training systems is a barrier to the successful implementation of Innovative Operational excellence at FNBZ

- a. Strongly disagree
- b. Disagree
- c. Neither agree nor disagree
- d. Agree
- e. Strongly agree

15. Inappropriate or lack of government policy is a barrier towards implementing an effective operations excellency model at FNBZ

- a. Strongly disagree
- b. Disagree
- c. Neither agree nor disagree
- d. Agree
- e. Strongly agree

Internal barriers include

16. Lack of infrastructure is a barrier to an innovative operations excellence at FNBZ

- a. Strongly disagree
- b. Disagree
- c. Neither agree nor disagree
- d. Agree
- e. Strongly agree

17. Rigid organizational arrangements and procedures is a key barrier towards implementing an effective operations excellency model at FNBZ
- Strongly disagree
 - Disagree
 - Neither agree nor disagree
 - Agree
 - Strongly agree
18. Hierarchical and formal communication structures,
- Strongly disagree
 - Disagree
 - Neither agree nor disagree
 - Agree
 - Strongly agree
19. Conservatism and conformity is a key barrier towards implementing an effective innovative operational excellence at FNBZ
- Strongly disagree
 - Disagree
 - Neither agree nor disagree
 - Agree
 - Strongly agree
20. Lack of vision, is a key barrier towards implementing an effective innovative at FNBZ
- Strongly disagree
 - Disagree
 - Neither agree nor disagree
 - Agree
 - Strongly agree
21. Resistance to change, is a key barrier towards implementing an effective innovative at FNBZ

- a. Strongly disagree
 - b. Disagree
 - c. Neither agree nor disagree
 - d. Agree
 - e. Strongly agree
22. Lack of motivation, a key barrier towards implementing an effective innovative at FNBZ
- a. Strongly disagree
 - b. Disagree
 - c. Neither agree nor disagree
 - d. Agree
 - e. Strongly agree
23. Risk-avoiding attitudes and a key barrier towards implementing an effective innovative at FNBZ
- a. Strongly disagree
 - b. Disagree
 - c. Neither agree nor disagree
 - d. Agree
 - e. Strongly agree
24. Overall neglect and misuse of talents within the organization is a key barrier towards implementing an effective innovative at FNBZ
- a. Strongly disagree
 - b. Disagree
 - c. Neither agree nor disagree
 - d. Agree
 - e. Strongly agree

***** Thank you for your participation! *****

APPENDIX II: QUESTIONNAIRE – CUSTOMERS

My name is Chipwatanga Timothy,

I am a student at University of Zambia. I am conducting research on the subject of “Impact of Operational Excellence on Organisational Performance: A Case Study of First National Bank Zambia”. This research is for academic purpose and it will be treated with the confidentiality it deserves. This questionnaire is administered to find out your satisfaction level in using the bank’s services. The data collected is to be used specifically for research purposes.

Instructions: *(Please read the instructions given and answer the questions as appropriately as possible).* It is advisable that you answer or fill in each section as provided. Make an attempt to answer every question fully and honestly.

I thank you in Advance

Yours Chipwatanga T.

1. Customer type: which type of customer you are to the Bank (please tick only one)?

Individual ☐ SME ☐ Large Corporate ☐ Agric ☐ Gov/NGO ☐

2. How long have you been a customer at this Bank?

Less than 1 year ☐ 1-3 years ☐ 4-8 years ☐ Over 8 years ☐

3. What kind of products and services do you maintain at this bank (please tick all appropriate)?

Current A/c ☐ Savings A/c ☐ Loan A/c ☐ Investment A/c ☐

4. What do you feel about the overall service level of your bank?

Excellent ☐ Good ☐ Moderate ☐ Poor ☐ Very poor ☐

5. To what extent are the following customer experience attributes reflected in your bank? Use a scale of 1-5 where:

5-Excellent, 4-Good, 3-Moderate, 2-Poor, 1-Very Poor (please tick as appropriate)

Customer Experience Attribute	1	2	3	4	5
Tariff and rates					
Customer service quality					
Efficiency of service					
Service reliability					
Communication/education of new products/services					
Products/services range					
Security of environment					
Convenience and accessibility of bank services					
Digital banking services					

6. Do you think that your bank caters for all your banking needs?

Yes ☐ No ☐

7. Do you use the services of alternative banks?

Yes ☐ No ☐

8. If Yes, select the reasons for using services of alternative banks (please select all appropriate responses)

Customer Experience Attribute	Please tick only appropriate reasons
Tariff and rates	
Customer service quality	
Efficiency of service	
Service reliability	
Communication/education of new products/services	
Products/services range	
Security of environment	
Convenience and accessibility of bank services	
Digital banking services	
Other (please indicate here)	

Thank you for your responses.

APPENDIX III: INTERVIEW GUIDE WITH SELECTED EMPLOYEES

- 1) Age of the respondent
- 2) Level of education.....
- 3) Position.....
- 4) What can be said about the performance of the bank in the previous two financial years?
- 5) From a holistic point of view, what different aspects or dimensions of performance do you measure organisational performance on?
- 6) Do you have set targets for performance of these aspects/dimensions and have they been met?
- 7) Do you think your current operations do fulfil the needs of customers?
- 8) Do you think your current operations capability has influenced the current low rank position of FNBZ among top commercial banks in Zambia?
- 9) Do you have a tendency to train and develop employees to enhance quality services and how effective is this?
- 10) What steps do you often take to improve customer satisfaction and loyalty?
- 11) What steps do you often take to improve employees' satisfaction and loyalty?
- 12) Lastly, as a manager what would you suggest as steps to improve customer satisfaction, operations, employee performance and profitability at FNBZ?

APPENDIX VI: ETHICAL CLEARANCE



THE UNIVERSITY OF ZAMBIA

DIRECTORATE OF RESEARCH AND GRADUATE STUDIES

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Approval of Study

10th May, 2019

REF. NO. HSSREC: 2019-JAN-025

Timothy L. Chipwatanga
Graduate School of Business
P.O. Box 32379
Lusaka

Dear Mr. Chipwatanga,

RE: "IMPACT OF OPERATIONALE EXCELLENCE ON ORGANISATION PERFORMANCE: A CASE STUDY OF FIRST NATIONAL BANK ZAMBIA"

The University of Zambia Humanities and Social Sciences Research Ethics Committee IRB has approved the study noting that there are no ethical concerns.

On behalf of The University of Zambia Humanities and Social Sciences Research Ethics Committee IRB, we would like to wish you all the success as you carry out your study.

In future ensure that you submit an application for ethical approval early enough.

Yours faithfully,

Dr. J. Mwanza

BA, MSoc, Sc., PhD

CHAIRPERSON

**THE UNIVERSITY OF ZAMBIA HUMANITIES AND SOCIAL SCIENCES
RESEARCH ETHICS COMMITTEE IRB**

CC: Director Directorate of Research and Graduate Studies
Assistant Director (Research), Directorate of Research and Graduate Studies
Assistant Registrar (Research), Directorate of Research and Graduate Studies
Senior Administrative Officer (Research), Directorate of Research and Graduate Studies

Excellence in Teaching, Research and Community Service

APPENDIX VII: CONSENT LETTER



how can we help you?

Timothy Chipwatanga
FNBZ
Lusaka

17 June 2017

Dear Timothy

Re: Request to Conduct Research for Educational Purposes

We refer to the above request. Please note that your request to conduct your research will be granted provided that it is for the sole purpose of furthering your education and that the information that will be availed to you remains confidential.

We wish you all the best and please share with us the outcome of your research.

Yours faithfully,

A handwritten signature in black ink, appearing to read 'Mako Ndumba', is written over a circular stamp or seal.

Mako Ndumba – Senior Manager: Enterprise Risk Management

A Licensed Commercial Bank

Physical Address: Stand number 22767 Corner Great East Road and Thabo Mbeki Road Lusaka Zambia, Postal address: First National Bank Zambia Limited P.O. Box 36187 Lusaka Zambia Email: info@fnbzambia.co.zm and Web: www.fnbzambia.co.zm, Tel: +2600 211 386800 and Fax: +260 211 253057

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