DOCTOR OF BUSINESS ADMINISTRATION (DBA)

AN ANALYTICAL REVIEW OF THE EFFECTS OF BUSINESS RE-ENGINEERING IMPLEMENTATION PROCESSES ON FIRM PERFORMANCE: A CASE OF TAZAMA PIPELINE LIMITED

By

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A Dissertation Submitted in Partial Fulfillment of the Requirements for the Degree of Doctorate in Business Administration of ZCAS University

ZCAS University

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DECLARATION

I **Peggy Kaponda Banda** declare that:

The research reported in this dissertation/thesis, except where otherwise indicated, is my original research. Any references to studies of other researchers have been duly acknowledged. This dissertation/thesis has never been submitted for any degree or examination at any other university. Dr. Sidney Kawimbe and Dr. Charity Meki-Kombe supervised this original piece of work.

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DEDICATION

I dedicate this work to my Lord God almighty, my husband Charles Banda and children Mphatso, Charles Junior and Taizya.

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I would like to acknowledge the following people whose assistance materially and academically immensely shaped this study. My principal and co-supervisor Dr. Sidney Kawimbe and Dr. Charity Meki-Kombe respectively, who tirelessly provided the much-needed guidance that I will forever value. I further acknowledge the support and contribution from my brother Dr. Kombe Kaponda, Dr Austin Mwange, and other friends and family who contributed directly or indirectly towards the completion of this thesis.

To you all, May the good Lord bless you abundantly.

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LIST OF ABBREVIATIONS

ADKAR	Awareness, Desire, Knowledge, Ability, Reinforcement
BRP	Business Process Re- engineering
PDCA	Plan –DO- Check – Act
TQM	Total Quality Management
TPL	TAZAMA Pipelines Limited
MIT	Michigan Institute of Technology
KPI	Key Performance Indicators
IT	Information Technology
EC	Electronic Commerce
CE	Concurrent Engineering
MRP	Management Reporting Protocol
CAD	Computer aided Design
CAE	Computer aided Environment

ABSTRACT

The main objective of this study was to analyze the effects of the implementation of Business Process Re-engineering on the financial performance of TAZAMA Pipelines Limited, a state-owned company. This was in order to examine factors affecting the successful implementation of BPR and establish bench marking models for effective implantation.

The study used a mixed methods research approach with more emphasis on qualitative rather than quantitative aspects while adopting a post-positivist philosophy covering interpretivist. A total of 30 respondents were interviewed using convenient sampling technique and collected data was analyzed using content analysis. Data were collected using a pre-tested questionnaire drawn from the five departments of TAZAMA.

The study revealed that IT had greatly enhanced communication within the organization. Capacity building initiatives to prepare the respondents were inadequate as they did not cover all staff. Based on the findings, the conclusion was that even though the implementation of BRP at TPL has enhanced work processes by leveraging on IT, there are change acceptance challenges in the BRP implementation project arising from poor stakeholder engagement by management and the consultant.

Furthermore, In addition, TPL needs to improve on the work processes by leveraging the latest technology in the industry and involving all stakeholders. More so TPL needs to make the organizational structure leaner and employ frequent capacity-building initiatives, such as workshops and small brain-storming teams while also engaging core staff.

CHAPTER ONE: INTRODUCTION

1.0 Overview

The main purpose of the study was to conduct an analytical review of business re-engineering (BRP) implementation processes on firm performance using the case study of TAZAMA Pipelines Limited. This chapter presents the background of the study, the statement of the problem, the research objectives and the research questions. The chapter also presents the significance of the study, the justification, the scope of the study, limitations, and delimitations, definitions of terms and ends with the summary chapter of the thesis.

1.1 Introduction

Contemporary organizations encounter numerous challenges due to swift technological improvements, as they persist in employing outdated and conventional methodologies to execute their operations (Awolusi & Atiku, 2019). In order to enhance an organization's competitiveness and promote long-term organizational viability, adoption of the idea of BRP is being pursued across the globe (Nsien, Nkutt, & Umoh, 2023). Generally, BRP entails a comprehensive overhaul of existing processes, involving the abandonment of current methodologies and approaches (Okoisama, Obuikwu, & Agbiriogu, 2022). Over the past decades, BRP has gained much importance to most businesses across the globe. That is from small scale to large scale businesses in both the private and public sectors (Nsien, Nkutt, & Umoh, 2023). Today, thousands of firms around the globe have such redesigned organizational structures through adoption of BRP. Organizations in the oil and gas industry have not been left out in this initiative of adopting and integrating BRP initiatives into their processes and systems as noted by several scholars.

With rapid globalization and technological advancements, oil and gas firms face rapidly changing operating environments which have compelled them to embrace BRP (Asikhia & Awolusi, 2015). For instance, in 2016 it was reported that leading firms in the petroleum industry of Pakistan such as Attock Petroleum Limited were increasingly embracing BRP initiatives. Badriansyah, Pratama & Dachyar (, 2022) also notes that majority of firms in

Indonesia's oil and gas industry have implemented BRP to enhance revenue administration. Similar observations are made by Dachyar & Sanjiwo , 2018)on the oil and gas industry of Indonesia. (Badriansyah, Pratama, & Dachyar, 2022) further highlight that firms from the Indian oil and gas industry have remained committed to using BRP as a method to transform their operations and systems towards sustained performance. Implementation of BRP has also gained prominence in the Nigerian oil and gas industry (Asikhia & Awolusi, 2015).

Nevertheless, despite the substantial expansion of the BRP initiative, not all firms that successfully undertake BRP initiatives get desired outcomes (Asikhia & Awolusi, 2015). According to Ozcelik's (2010) research, a significant proportion of firms from the oil and gas industry (ranging from 50 to 70 percent), fail to attain the desired substantial outcomes following BRP implementation. This high failure rate has been attributed to poor BRP implementation (Asikhia & Awolusi, 2015). However, a significant number of prior studies such as Asikhia & Awolusi (2015), Badriansyah, Pratama, & Dachyar (2022) found that BRP significantly enhances organisational performance in the oil and gas industry. Such contradictory and inconclusive research outcomes offer a unique opportunity for carrying out research on BRP and its effects on business performance and the factors impacting BRP implementation in the oil and gas industry. Most significantly, there is lack of empirical research related to BRP in the oil and gas industry. Particularly, very few studies have been done on the oil and gas industry within the Southern African region as most studies have concentrated on other African countries such as Nigeria and Kenya. Moreover, based on a comprehensive literature review, no research has been done yet to understand the effects of BRP on performance of Tanzania-Zambia Mafuta (TAZAMA) Pvt Ltd which is the focus of the present study. Hence, based on the given analyses of prior research studies, the purpose of this research is threefold: Firstly, to evaluate the current state of the BRP implementation at TAZAMA Pipelines Limited; secondly, to evaluate the current state of the BRP implementation at TAZAMA Pipelines Limited and finally, to propose a benchmarking model for effective implementation of BRP at TAZAMA Pipelines Limited.

1.2 Background of the Study

Business enterprises continue to encounter a dynamic and evolving landscape as a result of intensified market rivalry, rapid technological advancements and elevated consumer demands (Awolusi & Atiku, 2019). As a result, the work processes that are structured based on the idea of division of labor are no longer capable of achieving the desired level of performance (Nsien, Nkutt, & Umoh, 2023). In light of the evolving business landscape, organizations including those from the oil and gas industry are increasingly adopting the practice of BRP, which entails substantial investments in Information Technology (IT) (Dachyar & Sanjiwo, 2018). The TAZAMA Pipelines Limited is among one of the public sector organizations from the oil and gas industry that has turned to implementation of BRP to ensure and enhance sustained performance in this rapidly changing business environment (Onyango, 2023; TAZAMA Pipelines Limited, 2020). The motivation for the BRP implementation was the declining performance of the TPL between 2010 and 2020 where profit margins declined by 15-20% over the same period (Chisanga, 2018; TAZAMA Pipelines Limited, 2020). In this regard, Tanzanian and Zambian governments agreed to recapitalise and revamp TAZAMA Pipelines Limited by implementing turn-around strategies where BRP was among one of them (TAZAMA Pipelines Limited, 2020). However, the implementation of the BRP turnaround strategy had taken longer than expected and is to date about 60% complete such that the company has not yet fully reaped any benefits of BRP implementation (Onyango, 2023; TAZAMA Pipelines Limited, 2020). As stated in the company's 2020 annual report, successful implementation of BRP will bring a quantum leap in financial and operational performance (TAZAMA Pipelines Limited, 2020).

Tanzania Zambia Mafuta (TAZAMA) also referred to as (TPL Ltd), is a joint company of the government of Zambia and the Tanzanian government shareholding. Zambia possesses a shareholding of 66.7% shares while Tanzania holds a shareholding of 33.3% (Onyango, 2023). TAZAMA was established by an act of Parliament No. 18 of 1967 and an Amendment Act No.25 of 2009 that stipulates its mandate as "To design, construct, lay, own, operate, and maintain a pipeline for the carriage of oil or petroleum products from a port at Dar es Salaam in Tanzania to a point at Ndola in Zambia". Commissioned in 1968,

TAZAMA owns, operates, maintains and owns a crude oil pipeline from the port of Dar-es-Salaam to INDENI Refinery in Ndola covering a total distance of 1,710km, with a capacity of 22,000 barrels per day (Chisanga, 2018). It also operates, owns and maintains a Tank Farm at Kamoni in Dar-es-Salaam consisting of six tanks with a total holding capacity of 232,000 cubic meters (Onyango, 2023). Transportation of crude oil is achieved with the use of seven pump stations, two of which are in Zambia and five which are located in Tanzania.

As observed by Patton (2018), the petroleum industry in Zambia is characterized by the upstream and downstream petroleum sub-sectors. The upstream component is comprised of crude oil exploration, production and transportation, while the downstream industry involves product refining, transportation, storage, distribution and retail. Petroleum, which plays a vital role in running the economy of Zambia, particularly in the mining, transport and agriculture sectors and, contributes 9 per cent of the nation's total energy requirements.

At TAZAMA the business operations are dependent on two main offices in Ndola with a few depots across the country and the other one in Dar-es Salaam. The main purpose of TAZAMA's formation was to cheaply transport petroleum products and crude oil from the port of DAR-es-Salaam into landlocked Zambia (Onyango, 2023). Like many other oil or petroleum companies world-wide who are facing a variety of business and operational challenges due to globalization of manufacture and markets, TAZAMA is not excluded from the predicament. This has prompted many oil marketing companies to create a change in the competitive environment with various conditions that will enable them to be competitive in both international and domestic markets (Ozcelik, 2010).

Pipelines suffer corrosion and develop leaks every now and then due to age and absence of regular maintenance. Repair and maintenance of those leaks is very vital in order to avoid degradation of the environment, which is done at a huge cost to the company. As a result of the inability of TAZAMA Pipelines Limited to supply all the refined petroleum products that are required by Zambia, in adequate quantities, the government of Tanzania and that Zambia, have since 2016 been contemplating building a 1,349 kilometers refined petroleum products pipeline at an estimated cost of US$1.5 billion (Onyango, 2023). There has been no time frame given yet on how this milestone will be achieved. In the meantime,

it has proven difficult to maintain the line since the pipeline's inception, and with the many leaks recorded since then. In 1973, the first leak of the pipeline occurred and another 100 leaks of the pipeline were recorded by 1983 (Konyo, 2019).

Between 1999 and 2007 the refinery was shut down due to fuel shortages in the country, erratic supply of feedstock and a fire that occurred (Onyango, 2023). In 2007, the Zambian government strategized by taking up the role of being suppliers of feedstock and appointed TAZAMA as its Agent in selling products to Oil Marketing Companies and overseeing procurement of the filtering process. In spite of all that, as recently as 2012, Zambia experienced shortages of fuel due to a pipeline burst at Ilunga in Tanzania. On 23rd September, 2020, as evidenced by Kant & Singh (2008) the latest leak occurred when the pipeline burst spilling oil into Mandazi River at Kalamu basin in Tanzania. The company was ordered to make prompt compensation to people who were affected by the oil leakage. Such operational challenges have prompted the company to start looking for ways of preventing such occurrences while remaining profitable and relevant in the globalized energy sector. This had prompted Zambia and Tanzania to start the replacement of pipes by replacing the old 8-inch pipes to the 12-inch pipes.

Business process re-engineering (BRP) can be defined as a practice management in which linked tasks that are vital in achieving the particular objectives of a company are radically redesigned. The main objective of BRP is to analyze workflows in business operations so as to optimize business processes fully and eradicate all tasks that do not contribute to the improvement of performance or provide value addition to customers. IT was used to automate and incorporate all the steps in the process that are vital to initiatives of BRP. Three Business Process Re-engineering success stories, Air bob, T-Mobile, Ford Motor Company in the United States of America, have made many companies including gas and oil companies attempt to put into practice and embrace a variety of operations management strategies. It is hoped that these operations and management strategies that have effectively been implemented elsewhere will enable gas and oil companies to recognize environmental changes and proactively respond by making significant improvements. This is one of the Business Process Re-engineering (BRP) management techniques which has been very responsive in the last two decades (Tiwari, Majeed, & Vergidis, 2008)

Companies are using BRP so that they can substantially improve performance on the key processes that have an effect on customer performance, (Addolvand, Albadvi, & Fedowsi, 2008) . Scholars such as Abrahamson (1996); Thomas (1993) and Hammer & Champy (1993), have noted the many benefits of using BRP. The following are among the many advantages noted:

Flexibility- One of the most vital characteristics of Business Process Re-engineering is that it stimulates the strategy of processes with minimal expenses. The majority of the linked processes can be company reengineering processes that focus on the automation of various repetitive parts in the typical workflow of the company. These can be easily customized to meet the requirements of any expansion in productivity of the company. The improvements to business process mainly consist of eliminating process bottlenecks, beginning parallel processing and completely eliminating all unnecessary procedures.

Reduced Risks-The visibility of steps in the business process re-engineering allows for attentiveness to inefficiencies. It enables TAZAMA to operate more productively so that the organization is able to conserve resources. Business Process Re-engineering is also responsible for the construction of well-designed, implemented and monitored procedures that help to reduce operating risks such as fraud.

Transparency- There are certain regulations in the industry that a company needs to comply with. Business process re-engineering makes sure that organizations remain transparent and execute the regulatory requirements at ease through which compliance delays and any associated penalties and fines can be prevented.

In their Kentucky studies Greenbaum, (1995) observed that BRP leads to contentment of employees. This is because business process re-engineering gets rid of a lot of red tape in the organization and as a result allows employees to concentrate fully on their work. This automation process gets rid of a lot of repetitive work which results in easy access to information and consequently increased productivity and a content workforce. Worker contentment in turn leads to improved customer care owing to processes being

simplified increased productivity and employees being accorded adequate time to better focus on customers.

According to studies such as Grover & Malhotra (1997) employees are in a better position to respond to customers proposals instantly, customize their BRP requirements and quickly generate solutions. Business process re-engineering is responsible for bringing people and technology together in a way that increases customer satisfaction. Also, employees are able to deliver the right results for customers and related stakeholders. The other notable benefit is that the BRP has demonstrated its ability to improve consistency where, all tasks can be implemented in the exact way that they were planned and designed. This in turn builds durability by helping in smooth adaptation while maintaining control and managerial oversight as well.

On the contrary, Blanchard & Olivier (2019) are of the view that despite Business Process Re-engineering bringing fundamental changes to the AL structure, work methods, techniques, appraisal systems, performance behavior and attitude of workers in an organization and successfully executing BRP are quite difficult. This is because organizations vary broadly in their characteristics and culture, employees' behavioral variations, hence making it very difficult to identify the pitfalls that management should avoid while implementing BRP.

The common challenges that were faced by the three successful Business Process, Reengineered companies Airbnb, T-Mobile, Ford Motor Company in the United States of America, are that, in some cases, the efficiency of one department was improved at the expense of the overall process. As alluded by Hammer & Champy (1993), the BRP approach did not provide an instant resolution; it concentrated mainly on long haul income collaborations of a business which not only requires a lot of effort to take shape but is also difficult to measure; it required a huge venture in IT alongside proper planning, extremely good teamwork, and exceptional implementation with the worst being that in some cases, it replaced humans when it came to getting the job done without errors and as a result posing as a real threat to jobs.

Furthermore, gas and oil companies are currently seeking to embrace and execute a set of operations management strategies that have been successful elsewhere and as result it will help them to identify changes in their environment and to proactively respond by making major improvements. Business Process Re-engineering (BRP) is one of the management strategies that has attracted a lot of attention over the last two decades (Siha & Saad, 2008). According to Kant & Singh (2008) business process re-engineering can be defined as a tool that is used for completely redefining business processes and changing the business processes. In this case, processes are denoted by a group of business activities that result in an output which when processed become ineffective and stale. As a result, they are unable to produce new or substituted design results.

Companies are using BRP so that they can substantially improve the performances that have an effect on AL and performance of customers. TAZAMA Pipelines Limited has in the past two years been implementing BRP in line with its strategic plan for the period 2019 - 2023 which is set with a vision: "A leading and reliable transporter of petroleum products in Zambia and the sub-region," whose realization is dependent on three thematic areas; 'financial excellence' that will result in sustainable financial resources, 'transportation excellence' in petroleum products that will result in efficient and effective delivery and an 'operational excellence' resulting in high productivity.

In line with the above strategic plan, as of November 2019, both the Zambian and Tanzanian governments discussed whether to modernize the aging TAZAMA Pipelines Limited or create a new pipeline to run parallel to the original line. The new project will aim at facilitating the transportation of crude oil, refined oil, and natural gas (with a 150 MW gas power plant proposed to be constructed in Chisala). Further in May 2020, TAZAMA Pipelines Limited put-on record that it was seeking a $400 million loan to expand the 954-km, 8-inch portion of the pipeline to the full 12-inch diameter of the remainder of the pipeline. This required new business thinking that suits the current market environment and as such necessitated the BRP in TPL. The company in this strategic plan pinned its performance to the six (6) core values: Customer-focused Service, Integrity, Transparency, Innovation, Loyalty and Team Work. It is against this background that this

study sought to analyze the impact on performance of the Business Process Re-engineering at TAZAMA Pipelines Limited.

1.3 Statement of the Problem

Since its inception in 1968, TAZAMA Pipelines Limited (TPL) has been operating in a virtually monopolistic environment. The modern business environment is unique because it is marked by rapid technological improvement and intense competition. The growing need for technological improvement is driven by the survival of businesses, notably Oil Marketing Companies (OMC's). Hammer & Champy (1993) estimate that as many as 50-70 percent of companies that undertake BRP do not achieve the dramatic results that they seek. This is largely attributed to poor implementation of BRP rather than a problem with the concept itself (Kant & Singh, 2008).

According to Ozcelik (2010), the main reasons for the failures in implementing BRP include not linking BRP initiatives to strategic objectives, insufficient focus on customers' needs, insufficient focus on change drivers, and a myopic focus on the tactical layer of the organisation. Patton, (2018) defines analytical review as a process that critically examines a programme and involves gathering and analyzing data about the activity of a program, and conclusions whose objective is to inform programming decisions and improve effectiveness.

Furthermore, it has become necessary to systematically assess the design, implementation results of the BRP initiative at TPL for the purposes of learning and decision-making. This is due to the fact that it has been three years since the introduction of BRP at TPL yet the company was not among those listed by government as high performers among the state-owned enterprises for the year 2020 as reported in the Energy Report of 2020. In addition, there have been no formal efforts to determine the progress, and performance of the company according to set expectations. Efforts which if made may appreciate the challenges and prospects arising that have been made so far within the company or by the government.

The shut down and impending reconfiguration or conversion of INDENI from a refinery to an Oil Marketing Company (OMC) is a great shift in the relationship with TPL and the

industry as a whole. It has further become necessary to recognize the causes of any challenges and opportunities or prospects as a way of suggesting best strategies on how to overcome identified challenges as well as take advantage of the prospects. TAZAMA Pipelines Limited is among the public sector organizations from the oil and gas industry that has turned to implementation of BRP to ensure and enhance sustained performance in this rapidly changing business environment (TAZAMA Pipelines Limited, 2020). The motivation for the BRP implementation was the declining performance of the TPL between 2010 and 2020 where profit margins declined by 15-20% over the same period (TAZAMA Pipelines Limited, 2020). In this regard, Tanzanian and Zambian governments agreed to recapitalise and revamp TAZAMA Pipelines Limited by implementing turn-around strategies where BRP was among one of them (TAZAMA Pipelines Limited, 2020).

However, the implementation of the BRP turnaround strategy had taken longer than expected and is about 60% complete such that the company has not yet fully reaped any benefits of BRP implementation (Onyango, 2023; TAZAMA Pipelines Limited, 2020). As stated in the company's 2020 annual report, successful implementation of BRP will bring a quantum leap in financial and operational performance (TAZAMA Pipelines Limited, 2020). As further highlighted in the TAZAMA Pipelines Limited (2020) report, successful implementation of BRP will offer TAZAMA Pipelines Limited opportunities for diversification, modernization of business operations and improvement. However, no empirical research has been undertaken yet to understand the factors behind the delayed implementation of BRP at the company as well as the effects of successful BRP implementation on performance of the company. Therefore, this motivated the researcher to examine the effects of BRP on firm performance in the oil and gas industry using the case of TAZAMA Pipelines Limited.

In addition, from a review of literature, the only formal study done in Zambia on BRP is by Lugosi, and Ngoma (2018), which focused on manufacturing firms in Zambia. The study sampled 60 manufacturing companies out of which only 30% had done some form of Business Process Re-engineering. The research concluded that the concept of BRP is usually misinterpreted in Zambia and it is mostly for IT induction or redesign. In addition, the study did not clarify, study, or elucidate the challenges and opportunities arising as a

result of the implementation of BRP. Key questions remain on how effective BRP is as a change management tool especially in establishing how effective the process is in improving productivity. It has been three years since TAZAMA started implementing the BRP, and as such there is a need to assess the challenges if any as well as the opportunities that have arisen from inception of the BRP implementation. There is also scanty literature on a particular company that was studied specifically on BRP except for change management.

Additionally, there has been a shortage of formal study conducted on the nature of BRP specifically at the company level of TPL. This could be attributed to the relatively recent introduction of BRP within the organization, approximately three years ago, as mentioned earlier. Consequently, this study aimed at examining the effects of BRP on firm performance in the oil and gas industry using the case of TAZAMA Pipelines Limited.

1.4 Research Objectives

1.4.1 General Research Objective

The main objective of the study was to establish how BRP has affected the firm performance of TAZAMA Pipelines Limited.

1.4.2 Specific Objectives

i) To establish the current state of the BRP implementation at TAZAMA Pipelines Limited;

ii) To examine factors affecting the successful implementation of BRP at TAZAMA Pipelines Limited;

iii) To propose a benchmarking model for effective implementation of BRP at TAZAMA Pipelines Limited.

1.5 Research Questions

1.5.1 General Research Question

How has BRP implementation affected firm performance of TAZAMA Pipelines Limited?

1.5.2 Specific Research Questions

a) What is the current state of the BRP implementation at TAZAMA Pipelines Limited?

b) What are the main factors affecting successful implementation of BRP at TAZAMA Pipelines Limited?

c) What benchmarking model can be proposed for effective implementation of BRP at TAZAMA Pipelines Limited:

1.6 Significance/ Rationale of the study

In light of the energy policy change, this study can inform policy makers on the possible effects of the new energy procurement policy being implemented by government on the operations of TPL. The reconfiguration of INDENI as an OMC from a refinery company for the first time in the history of the refinery's existence has more questions than answers as regards to how it will fit into the downstream segment of the industry. This stated study holds several significance's:

Practical Implications: The findings of this study can provide valuable insights and recommendations to TPL, regarding the effectiveness of Business Process Re-engineering (BRP) in improving firm performance. This can inform decision-making and strategic planning within the, potentially leading to enhanced operational efficiency and competitiveness.

Academic Contribution: The study fills a research and literature gap by examining the effectiveness of BRP at the company level of TPL. It contributes to the existing body of knowledge on BRP implementation and its impact on firm performance, particularly within

the context of the gas and oil industry in which TPL operates. The study's findings can serve as a reference for future research in this area.

Bench marking and Best Practices: The study's results can provide benchmarks and best practices for others in the industry or those considering implementing BRP initiatives. By analyzing the experiences and outcomes of TPL's BRP process, the study can offer valuable lessons and insights for companies seeking to improve their operational processes and performance through similar initiatives.

Learning: The study can facilitate learning within TPL by highlighting the strengths, weaknesses, challenges, and opportunities associated with BRP implementation. It can promote a better understanding of the factors that contribute to successful BRP projects and help identify areas for improvement or adjustment in future initiatives.

Overall, the study's significance lies in its potential to contribute to knowledge advancement, inform practical decision-making, and promote continuous improvement within TAZAMA Pipelines Limited and potentially across the broader industry.

1.7 Justification of the study

There are noticeable gaps between the existing literature and the practical implementation observed in the field. A comprehensive examination of existing scholarly works on BRP practices has revealed that a significant body of literature has been dedicated to the study of BPR implementation and its effects on business performance in organizations within developed countries such as the United States, United Kingdom, Sweden and Germany (Ozcelik, 2010). However, limited scholarly focus has been directed towards studying BRP implementation and its effects on organizations in developing economies such as Zambia and Tanzania. In addition, majority of the previous studies have focused on sectors such as manufacturing, banking, service and telecommunication sectors whilst very few previous studies have analyzed BRP implementation and firm performance in the oil and gas sector (Asikhia & Awolusi, 2015;Awolusi & Atiku, 2019; Badriansyah, Pratama, & Dachyar, 2022). As further acknowledged by Arise and Adegbie (2021), there appears to be a scarcity of research on the impact of business process reengineering within the oil and gas industry compared to other industries. Review of literature also showed that most of the

previous studies on BRP and firm performance have been done in the private sector whilst such studies in the public sector are limited.

Furthermore, Lack of consistency in the findings of previous studies on the effects of BRP and firm performance were noted. More so, the practical gaps that have emerged include the delayed conclusion of the BRP implementation and the unsatisfactory performance of TAZAMA Pipelines Limited over the past decade (TAZAMA Pipelines Limited, 2020). As highlighted in the TAZAMA Pipelines Limited (2020) report, successful implementation of BRP will offer TAZAMA Pipelines Limited opportunities for diversification, modernization of business operations and improvement. However, no empirical research has been undertaken yet to understand the factors behind the delayed implementation of BRP at the company as well as the effects of successful BRP implementation on performance of the company. From the aforementioned there are significant empirical and practical gaps that necessitate further exploration. Therefore, the objective of this research was to bridge these gaps by examining the effects of BRP on firm performance in the oil and gas industry using the case of TAZAMA Pipelines Limited.

This study may therefore make valuable contribution to policy, practice and the broader body of knowledge. The study may help management at TPL to understand the factors affecting successful implementation of BRP.

1.8 Scope of the study

The study focused specifically on TAZAMA Pipelines Limited (TPL) and its implementation of Business Process Re-engineering (BRP). It aimed at assessing the effectiveness of BRP processes on the firm's performance within the context of TPL's operations. The study did not extend to other companies or industries but rather concentrated on TPL's unique circumstances and experiences.

1.9 Definition of Terms

There are various terminologies used alongside and around Business Process Re-engineering. The following are the key terms and their description:

Re-engineering: According to Addolvand, Albadvi, & Fedowsi, (2008) re-engineering is the fundamental radical rethinking and redesign of business processes in order to achieve major improvements in the critical, modern-day measures of performance such as quality, cost, speed and service.

Business Process: This is a collection of logically connected responsibilities that are carried out in order to accomplish specific business objectives. This is an organized, quantifiable series of actions that are structured to deliver certain outcome for a specific market or clientele. It proposes putting emphasis on how work is done within an organization (Mansor & Azudin, 2018).

Creativity: Creativity refers to the generation of ideas or a way of thinking that stimulates challenges, and enables people to find creative solutions to problems and generate opportunities out of problems (Mansor & Azudin, 2018).

Lean Thinking: It is a way of thinking about contributing to value addition with scarce resources and less surplus (Attaran & Attaran, 2018).

Crisis management: Is the way strategies designed and applied to help one deal with a sudden and significant negative event (Evdokimova & Llyin, 2016).

Radical change: Refers to change that modifies and rapidly occurs in the essence of social structures or practices. Specifically, this type of change affects the resources, norms, and interpretive schemes of groups and individuals (Davenport & Harris, 2017).

Business Process Re-engineering (BRP): Is a strategy focusing of business management that focuses on the investigation and design of business processes and workflows that have the goal of improving cost, efficiency and effectiveness of all business processes and output. Business process re-engineering is also known as business process redesign, business transformation, or business process change management. Business process re-engineering (BRP) strives to drastically reduce business costs and the process of duplication on a very huge scale. Re-thinking- reconstructing the structure, workflow and value chain innovation (Hammer & Champy, 1993).

Business Process: A business process is an activity or set of activities that accomplish a specific goal (Davenport & Harris, 2017).

Anticipatory Management: It is management of situations that include emotions fear, anxiety, hope for what is to come in the future (Burke & Peppard, 1995).

Total Quality Management: Total Quality management is defined as a continuous improvement and effort by the management and employees of a precise company to ensure customer loyalty and customer satisfaction over the long term (Farrel & Lewandowsky, 2018).

Development: Development can be defined as an objective-based methodology used to initiate a change of systems in an entity (Bradford & Burke, 2018). It can be defined as an objective-based methodology used to initiate a change of systems in an entity.

Downsizing: Downsizing is the permanent reduction of a company's labor force through the elimination of unproductive workers or divisions. Downsizing is a common AL practice, usually associated with economic downturns and failing businesses (Bradford & Burke, 2018).

Nudge Theory: Nudge theory is a concept in behavioral economics, decision making, Behavioral policy, social psychology, and related behavioral sciences that proposes adaptive designs of the decision environment (choice architecture) as ways to influence the behavior and decision-making of groups or individuals (Carsta & Tagliabue, 2018).

ADKAR: The ADKAR Model of Change Management is an outcome-oriented change management method that aims to limit resistance to change (Burke W. W., 2017).

The McKinsey 7S Model: This is a tool that analyzes firm’s design by looking at 7 key internal elements: strategy, structure, systems, shared values, style, staff and skills, in order to identify if they are effectively aligned and allow to achieve its objectives (Carsta & Tagliabue, 2018).

1.10 Limitation of the study

Limitations are occurrences and matters that arise in a study which the researcher has no control of. They restrict the extent to which a study can go, and occasionally have an impact of the conclusions and outcome that can be drawn. Every study, no matter how well-

conducted and constructed the study is it has limitations. “Because qualitative research occurs in the natural setting it is extremely difficult to replicate studies” (Wiersma, 2000). When you select certain methodologies and designs, for example phenomenology, they come with limitations over which you may have little control.

The generalizability of the conclusions drawn from case studies is seldom evident. A case study examines the actions of single individuals of a group. The behavior of this specific analytical unit can either be indicative of comparative entities or not. Case studies may give hints to what may have been discovered in related studies but more research would need to be covered in order to confirm whether results from one study would also apply to other situations

Due to certain Covid-19 restrictions, it was difficult to collect data physically from some employees at TPL. Owing to the nature of the studies, some respondents found it difficult to release information especially in instances were BRP didn’t yield positive results and certain clarifications were needed. For desk review, certain information was not availed by the company on the websites which required that it be obtained physically through interviews and document analysis.

1.11 Delimitations

The characteristics that define the researchers’ delimitations in the study result from the scope of the study being constrained (defining the boundaries) as well as the inclusionary and exclusionary decisions that are made throughout the planning stages of the research. Delimitations are as a result of the outcome of certain decisions that are made by the researcher as opposed to restrictions, which result from implicit characteristics of the method and design of the research. Among these are the choice of objectives and questions, variables of interest, the choice of theoretical viewpoints that were adopted, theoretical framework, the paradigm (qualitative/quantitative/mixed) and choice of participants. The choice of the problem at hand is the primary delimiting phase that suggest that there were additional similar problems that could have been chosen but were blocked from view

Being a case study, this research was mainly focused on four key departments of TPL that includes Operations, Engineering, Finance and Information Technology. TPL, being a

joint venture by two Governments and having offices domiciled in both countries, the researcher chose to focus mainly on the offices that are in Ndola, Zambia and two main depots namely, Lusaka and Solwezi with a few samples from the Dar es Salaam offices. The research approach informed the selection of the method of sampling such as purposive sampling method which was used to select 30 respondents. The purposive sampling approach helped the researcher to make the most out of the small population of interest in arriving at valuable research outcomes and qualitative responses which led to better insights and precise results. It was also a cost and time effective method because the choice of respondents excluded any Clients or the oil marketing companies who may sometimes be viewed as stake holders where efficiency of TPL is concerned.

The Researcher chose objectives that were solely focused on the outcomes of the implementation of BRP and were not extended to finding the effect on profitability which may be a subject for further research.

1.12 Summary of the Thesis

The chapter profile in this research is as follows:

Chapter 1: The chapter introduced the research and outlined the background to the research problem, the objectives of the study as well as the justification for the study. Lastly, scope of the study was stated as well as the delimitations.

Chapter 2: The chapter outlines the relevant literature related to the research objectives and presents the theoretical and conceptual framework that guides the study. It contains definitions of main terms and explains search strategy for the secondary data. Viewpoints of other authors regarding the research area in general and research problem in particular have been presented in a logical manner in this chapter

Chapter 3: The chapter outlines the research design, expanding on the details of the data collection method. The chapter explains the research process and addresses the issues of research philosophy, explanations research design, the choice and implementation of data

collection methods. Sampling aspect of the study and discussions of ethical considerations are also included in this chapter.

Chapter 4: The chapter outlines the data presentation and both graphical and narrative results are presented here. This is done through the use of tables and figures, some statistical presentation and discussion of results from the interview guide and interpretation of the results.

Chapter 5: The chapter discusses the results giving analysis and linking the findings to past research. It gives the research findings: conclusions are drawn and recommendations follow.

1.13 Chapter Summary

In this chapter, the background of the study was provided, introducing the concept of Business Process Re-engineering (BRP) as implemented at TAZAMA Pipelines Limited Limited (TPL).

Both research and literature gaps were identified, highlighting the need for the study. The objectives and research questions of the study were stated, and the chapter presented the rationale for conducting the research, the scope, limitations, delimitations, justification, and definitions of terms.

CHAPTER TWO: LITERATURE RERIEW

2.0 Overview

This chapter reviews literature on BRP starting with the definition of BRP and its elements. The chapter then reviews literature according to the research objectives. It considers: the effect BRP has on the firm performance of an organization; the effect technology has on the implementation of Business Re-engineering process; how the individual skills of staff affected the implementation of Business Re-engineering process.; What challenges an organization can have in the implementation of Business Re-engineering process; what options exists to handle the challenges and issues identified in order to take advantage of the prospects arising from the implementation of BRP. The chapter then outlines the theoretical and conceptual framework before giving the chapter summary.

2.1 Definition of BRP

Business process re-engineering (BRP) is frequently said to lack a widely accepted definition. However, BRP is defined by Aguilar-Saven (2004) as a strategy to achieve radical improvement in a variety of performance matrices. In order for an organization to meet its objectives, there is need for BRP to seek various ways to mix people, tasks, and materials. BRP also restructures information technology into all processes (Hammer & Champy, 2009).Over the years BRP has drawn a lot of attention as a management technique plan. This ascertains the fact that businesses across the world are facing greater challenges, and as a result, many firms are under pressure to act quickly and make strategical alterations in order to maintain their competitive advantage. Several authors have interpreted BRP differently as observed for instance by Davenport and Harris (2017) who have described BRP as the design and analysis of processes in organizations.

Various authors have offered their interpretations of BRP. For instance, Davenport and Harris (2017) characterize it as the analysis and design of work flows and processes within organizations. On the other hand, Hammer & Champy (2009) advocate for a radical overhaul of business processes to achieve substantial enhancements in essential performance metrics like service, cost, speed, and quality. According to Huang et al.

(2015), BRP refers to the significant adjustments that are made to one or more business processes that significantly affect the organization. It also calls for a multifaceted effort, frequently integrating cutting-edge technological implementations. By briefly addressing all components of work that have an impact on performance, re-engineering is a groundbreaking attempt to alter the way work is done. Process activities, such as employee jobs and compensation plans, organizational structure, and the responsibilities of managers and executors of organizational processes, can all be seen as part of performance (Huang et al., 2015). The business management structure and culture that upholds the principles and ideals with direct impact on everyone's conduct and expectations can also be influenced by re-engineering.

Reengineering can basically be defined as the radical restructuring and rethinking of corporate processes that are vital in obtaining significantly better results among various vital performance indicators, including cost, quality, service, and speed. With BRP, the value of the entire process is questioned rather than merely removing steps or responsibilities. The organizational elements of business, jobs structures, values and beliefs, management and measurement systems are interrelated in BRP. Nadarajah and Latifah (2014) purport that BRP can be understood to involve a way in which interconnected organizational sub systems can be strategically transformed while having variety of degree influences. The distinctive contribution of BRP to earlier organizational change strategies is the business process is the main priority.

According to Huang et al. (2015), BRP is a process that is a lateral or horizontal organizational form that captures the interdependence of tasks, processes, people, departments, and functions required to deliver a product or service to the client. BRP attempts to restructure organizational subsystems of management (style, values, and measurements), people (jobs, skills, culture), information technology, and organizational structures, in order to increase several performance indicators, such as quality, cost speed, and service. BRP entails a fundamental rethinking as well as a severe reorganization of processes (Kant & Singh, 2008). Over the past 20 years, there have been major changes in the global oil and gas industry (Habib & Shah, 2013): the growing influence of producer nations, the nationalization of the major oil companies' reserves (Exxon, Shell, and BP),

the mounting pressure from investors and the financial community for an improved return to shareholders, and the rising popularity of state-owned businesses have all influenced the adoption and implementation of BRP (Ahmad, Francis, & Zairi, 2007).

According to Ozcelik (2010), engineering refers to the core and revolutionary reconceptualization and restructuring of business processes with the aim of achieving substantial advancements in crucial and cutting-edge performance metrics, including cost, quality, service, and speed. This definition emphasizes four key elements: essential, fundamental, transformative, and processes.

Business Process Re-engineering (BRP) aims to create innovative ways of accomplishing tasks within an organization, involving employee organization and IT system utilization. It strives to depart from established processes to better align with the organization's objectives. The core function of the organization is the primary focus during re-engineering, as business owners question how the organization should operate, leading to a clear understanding of core activities and the basis for any existing assumptions. Radical revamping is another essential aspect, involving the elimination of current systems and procedures to create new approaches for task completion. BRP requires starting from scratch without assumptions or modifications, resulting in updated business procedures. Lastly, BRP enables organizations to achieve better performance rather than just incremental improvements. Organizations must be cautious about assumptions and ascertain what they want to accomplish efficiently and effectively. Dramatic improvements involve replacing existing processes with new and contemporary ones, while the division of labor approach should be replaced with a process-based approach for enhanced efficiency and effectiveness of processes.

Advocates of BRP argue that when properly implemented, businesses will experience significant advancements in cost reduction, profitability, productivity, and speed (Hammer & Champy, 2009). The main goal of BRP is to create innovative ways of organizing people and redesigning processes, supported by IT, to achieve an organization's objectives. When business processes undergo restructuring, it leads to changes in organizational structures and job responsibilities for employees, causing profound shifts in beliefs and values, as these elements are interconnected within an organization. Reengineering is considered

complete only when all components of the business system, including jobs, processes, and structures, are altered.

In this research, TAZAMA employs Business Process Re-engineering to improve organizational performance by enhancing the effectiveness and efficiency of its processes. Alongside restructuring business processes, this approach involves redesigning associated systems and all related structures.

Other authors, for instance, (Al-Mashari, Irani, & Zairi, 2001), have focused on the reevaluation, restructuring, and streamlining of business structures, processes, working methods, management systems, and external relationships, all contributing to value creation and delivery. On the other hand, (Addolvand, Albadvi, & Fedowsi, 2008) argue that BRP involves simultaneous redesign of business processes and the supporting IT systems, leading to significant enhancements in cost, quality, time, and the perception of an organization's goods and services. Levi(2014) views the core elements of BRP as the radical restructuring and rethinking of operational processes and structures, centered on the organization's core capabilities to achieve vastly improved performance.

While Davenport and Harris (2017) offer a more constrained explanation of BRP, their definition remains comprehensive. Both BRP and TQM emphasize the creation and management of business processes that generate goods and services within a specific business scope. However, neither approach focuses on planning and establishing strategic businesses. It is essential to recognize that neither BRP nor TQM alone aims to revolutionize a company and its industry.

It is widely acknowledged that IT serves as a potent enabler, and fundamental advancements require more process function redesign rather than merely IT implementation (Hammer & Champy, 2009). Despite IT specialists emphasizing the importance of new systems in BRP, the real challenge lies in implementing the changes and envisioning the transformation, rather than solely focusing on the technology itself. The concept of BRP often causes confusion in its interpretation and scope. Hammer (2015) discussed the restructuring of business processes, whereas Davenport and Harris (2017)

referred to business process redesign. However, numerous other authors use variations of these terms, all-encompassing both major and minor process changes. For instance:

1. Business process improvement (Harrington, 1991),
2. Core process redesign
3. Process innovation (Davenport & Harris, 2017), Business process transformation (Burke & Peppard, 1995),
4. Breakpoint business process redesign (Johanssen, McHugh, Pendleburv & Wheeler, 1993),
5. Re-engineering (Lowenthal, 2016)
6. Business process management (Duffy, 2014),
7. Business scope redefinition (Ventraman, 1994),

While some of these terms clearly pertain to a generic business process improvement model on a large scale, other authors (Earl, Sampler, & Short, 1995) argue that re-engineering can be implemented at various levels within the organization. For instance, IBM's re-engineered finance process achieved significant time, cost, and quality gains but had minimal impact on overall performance because it was not part of the company's core essential process in the business plan. When strategically placed in a context, BRP becomes a tool for dynamically aligning work processes with customer expectations to achieve long-term objectives. This requires the systems thinking advocated by (Al-Mashari, Irani, & Zairi, 2001), involving customers, suppliers, and future considerations. (Evdokimova & Llyin, 2016) demonstrated that the key to process planning lies not so much in understanding the current way it is accomplished, but rather in envisioning how to reshape it for the future.

Hammer (1992) outlines different types of businesses that engage in re-engineering. The first category includes companies facing significant risks with no other viable options to improve their performance. The second category consists of companies that are already performing well but recognize the opportunity to gain a competitive advantage by being proactive and anticipating potential issues. An organization may require business re-engineering if its costs significantly exceed those of its competitors or the acceptable limits dictated by business models, if its product failure rate surpasses that of its competitors, or if its customer service is so poor that customers openly criticize it.

2.2 Components of BRP

The requirement for business process transformation is typically influenced by factors such as emerging market opportunities, increased competition, declining market share, and weak financial performance. BRP encompasses the analysis and transformation of several vital components, which include:

i. Approach
ii. Procedure
iii. Technical know-how
iv. Culture

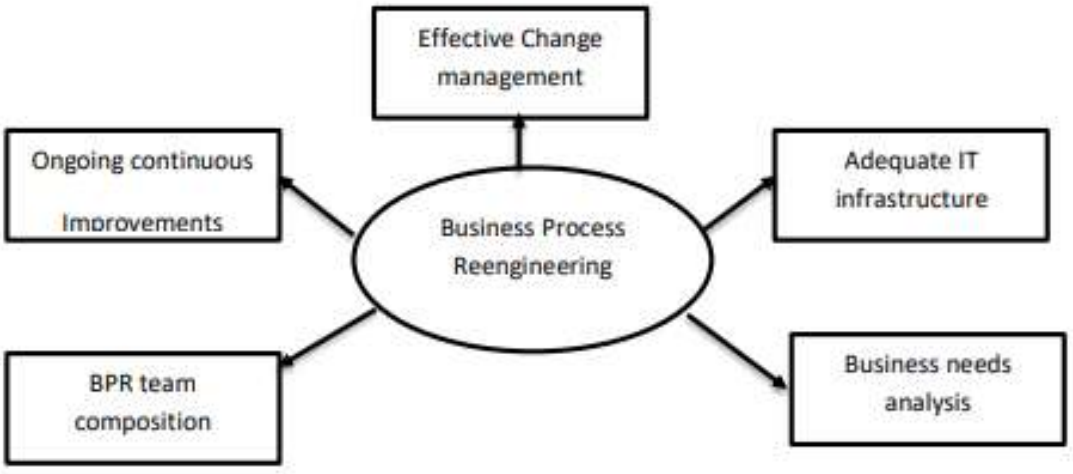

Figure 2.1 What BRP is all about source: (Hammer & Champy, 1993)

Steps in Business Process Re-engineering:

- Recognize the scope and goals of the re-engineering initiative.
- Map the existing processes and examine them to identify bottlenecks, inefficiencies and potential areas for improvement.
- Redesign the processes, putting emphasis on eliminating activities that do not add value to ensure that workflows are improved and leveraging technology.
- Develop a thorough execution plan that takes into account resource allocation, timelines, and change management strategies.
- Execute the restructured processes which involve communication, involving raining, and stakeholder participation.

- Evaluate and monitor the outcomes and performance of the re-engineered processes, making appropriate amends.

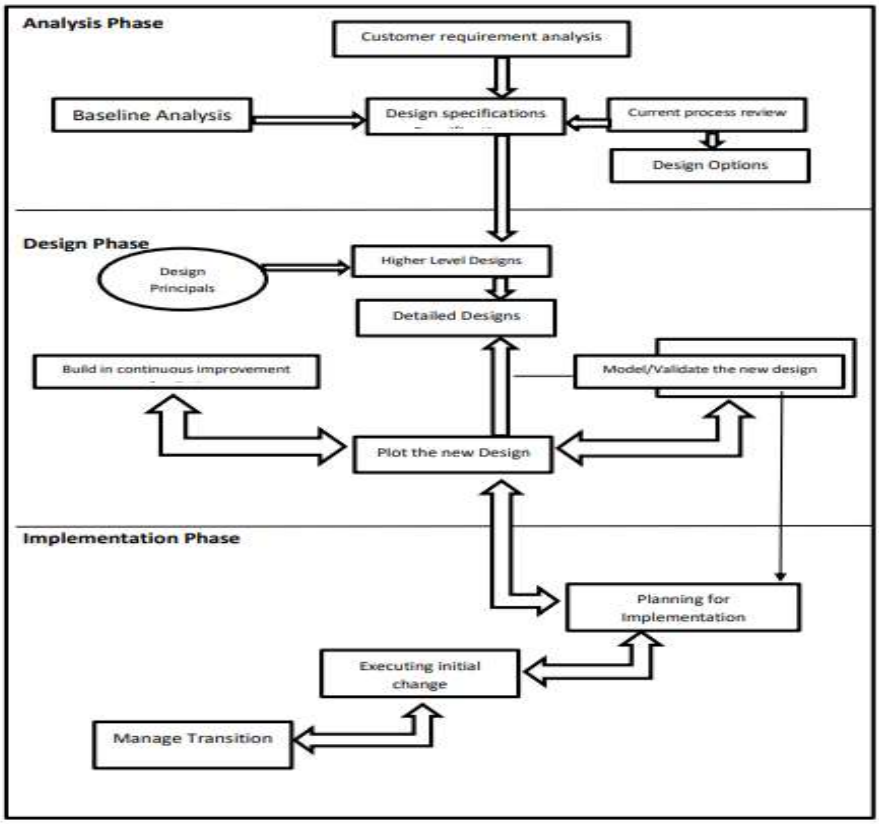

Figure 2.2: Three Phase BRP Model Source: Feather and Lynch (2018)

2.3 Benefits of Business Process Re-engineering

BRP plays a major role in all performance improvement in terms of cost, quality, delivery, employee productivity, etc. It also helps

- **Improved efficiency**: BRP's focus lies in eliminating non-value-adding activities, streamlining procedures, and minimizing waste. This has led to improved productivity in terms of both effectiveness and efficiency, as resources are now better utilized.
- **Cost reduction**: BRP assists to reduce costs that are related with materials, labor and operational inefficiencies by eliminating redundancies, utilizing technology and improving workflows.

- **Enhanced customer satisfaction**: Organizations can enhance customer satisfaction and loyalty by reengineering processes that enable to deliver goods and services quickly, with better quality and better customer experience.
- **Increased agility and flexibility**: BRP encourage organizations to adopt more flexible and agile processes. This enables them to react quickly to changes in the market, competitive pressures and clientele demands.
- **Quality improvement**: BRP strongly emphasizes on identifying and eliminating of errors and defects in processes. Improvements in product or service quality, enhance overall process reliability, decreasing rework and increasing the overall reliability of processes can all be achieved by the restructuring process having quality in mind.
- **Enhanced innovation**: BRP encourages organizations to critically think about their current processes and challenge traditional assumptions. This way of thinking encourages an innovative culture in an organization where fresh concepts and methods are embraced.
- **Improved employee engagement**: Organizations can tap into employee knowledge, creativity and expertise by engaging employees in the process improvement effort. The result is higher employee engagement and satisfaction.
- **Better alignment with business goals**: BRP ensures that certain procedures are closely aligned to the strategic objectives and goals.
- **Competitive advantage**: BRP can give us a competitive advantage in the market by lowering expense, streamlining, fostering innovation and increasing customer satisfaction.

2.4 Principles of Business Process Re-engineering

According to Hammer & Champy (1993) there are 7 rules of Business Process Re-engineering (BRP). These rules provide guidance for undertaking BRP initiatives and include the following:

1. **Organize around outcomes, not tasks**: BRP emphasizes on process structuring based on desired results or outcomes as opposed to individual responsibilities or

functional departments. This guarantees a concentration on value addition of customers and stakeholders.

2. **Identify and eliminate non-value-added steps**: BRP aims to eradicate activities that do not contribute to achieving the objectives of the organization. It encourages organizations to eliminate bottlenecks, streamline processes and reduce waste.

3. **Combine steps**: BRP advocates for the integration of several activities or phases into simplified processes by decreasing hand offs and delays. This facilitates the acceleration and simplification of process flows.

4. **Empower workers**: BRP strongly emphasizes that employees who carry out processes are empowered. It encourages organizations to delegate authority of decision making and ensure that employees are equipped with the necessary skills and resources to take ownership of their work.

5. **Capture information once and at the source**: BRP encourages recording data at the point of origin in order to avoid duplication of data entry and increase accuracy. It promotes using technology in order to streamline data integration and collection across systems.

6. **Link parallel activities**: BRP suggests linking parallel activities to enable parallel or simultaneous processing. These decreases with times and increases the entire procedure of the parallel activities.

7. **Put decision making where the work is performed**: BRP encourages organizations to be able to decentralize decision-making authority and push it to the lowest level possible. As a result, decisions are made quickly and efficiently since individuals are performing work that they have the necessary knowledge and context for.

2.5 BRP Implementation - Business Process Re-engineering Steps

Re-engineering a process concentrates on restructuring the whole process and comprises of essentially rethinking how work must be done in order to achieve significant

improvement. BRP differs from process improvements which mainly focus on functional or incremental improvement.

Re-engineering might not always be necessary, especially if the processes merely need optimization and are not looking for significant change. In such a case, managers have an option to use the strategy of improving processes.

Step 1: Set the vision and business goals

Senior management needs to recognize the current business environment; expectations of customers, opportunities and competition.

As a result, it is easier to understand the need for change and create a picture of where an organization aspires to be in the future. The objectives should then be made unambiguous in both qualitative and quantitative terms.

Step 2: Establish a competent team

The team that is chosen must be cross-functional because it takes perceptions and expertise from all levels to reduce the likelihood of failure.

Senior management must be in charge of setting a clear vision and strategic direction of tasks that need to be accomplished. They also require an operational manager who is familiar of the processes in an organization. In order to have a complete team it is vital to have appropriate engineers that have various specialties from various fields.

At this stage, it is vital to ensure goals and strategies are properly articulated. Managers can also carry out surveys and bench marking activities in order to determine the demands of clients and assess the competition

In this step, it is vital to communicate the objectives and business case of the project to the rest of the employees. This encourages them to be ready for what is to come and give feedback where necessary.

Step 3: Understand the current process

In this step, you need to choose the process (es) that you will redesign. Prioritizing such procedures that are cross-functional, inefficient, have bottle-necks or are value adding.

Once personnel are selected, they are rigorously analyzed in order to find any inefficiencies and gaps that are mapped using flowcharts or process maps. The Generic Business Process Flow Template illustrated in Figure 2.3 is an example of such flow charts.

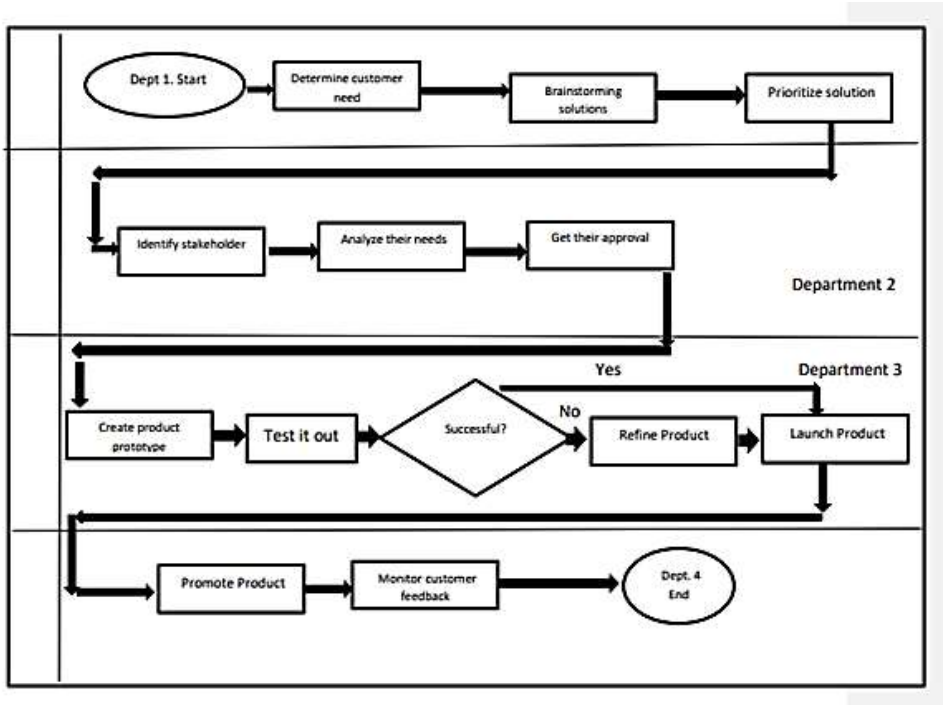

Figure 2.3: Generic Business Process Flow Template, Source: (Attaran & Attaran, 2018).

According to Attaran & Attaran, (2018), the Generic Business Process Flow Template is a valuable tool that aids organizations in streamlining their operations and achieving efficiency. This template provides a visual representation of the steps involved in a business process, allowing for better understanding and analysis. As illustrated in Figure 2.3, the first step in using this template is to identify the specific customer needs. Once the needs are identified, each step is mapped out in sequential order, highlighting dependencies

and interactions between different stages. Then define the right KPIs for the processes in order to monitor that the process has gained the desired effect once you implement them.

Step 4: Redesign the process

Keeping the vision in mind, redesign a new process that successfully addressing the shortcomings of the previous one. Here the team will create a map for the future state that shows the results that have been identified for the problems of the current state process.

Step 5: Implement the re-engineered process

Once the process has been redesigned, a quick test is carried out using the previous KPI's that were established in order to monitor how it functions. This enables the team to make necessary amends to the process before executing it to the entire firm. The team can implement the new processes on a larger scale if it performs better than the current one.

2.6 BRP Methodologies

There are several business process re-engineering methodologies. They highlight more ways of re-engineering business processes in addition to what we have discussed in the previous section. These include:

- The methodology by Hammer and Champy
- The methodology by Davenport
- The methodology by Manganelli / Klein
- The methodology by Kodak (Mohapatra & Mohapatra, 2013).

Hammer/Champy Methodology

The methodology introduced by Hammer and Champy popularized business process re-engineering (Mohapatra & Mohapatra, 2013). It involves six steps.

Step 1: The CEO who starts the re-engineering process should explain it well to the stuff by ensuring they outline the existing state of the business and the long-term goals for the company (Lopez-Arredondo et al., 2020).

Step 2: Identify business procedures in terms of their interactions with one another and the outside world. Here process maps can be utilized to illustrate the processes in this situation.

Step 3: Select the processes that have the potential of contributing to the value addition of the company once restructured and those that are easy to re-engineer.

Step 4: Analyze the current processes of the performance in relation to what is expected of them going forward.

Step 5: Restructure selected business processes using imagination, creativity and lateral thinking.

Step 6: Execute the restructured processes (Mohapatra & Mohapatra, 2013).

The Davenport Methodology

Davenport puts information technology at the heart of business re-engineering (Mohapatra & Mohapatra, 2013). The Davenport model covers six steps:

Step 1: Develop vision of the business and process objectives.

Step 2: Identify the processes of the business that need to be restructured. Davenport advises selecting not more than 15 processes at a time.

Step 3: Understand the performance and functionality of the selected processes. Furthermore, establish performance standards for the re-engineered processes (Lopez-Arredondo et al., 2020)

Step 4: Study how the newly developed business processes can be incorporated with information technology tools and applications.

Step 5: Design a functioning prototype of the new business process. Allow the team to evaluate the prototype and pinpoint any areas that need to be improved.

Step 6: Execute the tested model (Mohapatra & Mohapatra, 2013).

Methodology of Manganelli/ Klein

Manganelli and Klein, (2019) suggest that focus should only be on those business processes that are crucial to the strategic goals of the company and customer requirements (Mohapatra & Mohapatra, 2013).

Step 1: Ask everyone involved to define goals and prepare for the business re-engineering project.

Step 2: Choose significant business procedures for the redesign.

Step 3: Study the current performance of the selected processes and determine the future performance that you want to achieve (Lopez-Arredondo et al., 2020).

Step 4: Develop new work environments for the people in IT to improve the new processes.

Step 5: Execute the new work environments within the organization and the redesigned processes (Mohapatra & Mohapatra, 2013).

Kodak Methodology

Developed by the international Kodak, the Kodak methodology is applied across all Kodak facilities worldwide (Mohapatra & Mohapatra, 2013).

Step 1: Plan the process of the re-engineering project and define all project administration rules and procedures.

Step 2: Bring together your project team, assign project managers, and design a comprehensive process model for the methodology.

Step 3: Redesign the selected processes. This step should conclude with a plan of a Pilot Implementation of the redesigned processes.

Step 4: Implement the newly designed processes across the board. Adjust the Companies' infrastructure to the requirements of the new processes.

Step 5: The last step is performed parallel to the other steps. Here the project team should find ways to deal with obstacles that may occur during the re-engineering project (Mohapatra & Mohapatra, 2013).

2.7 BRP as a tool for change

According to Hammer and Champy (2009), the development of BRP can be traced back to changing trends over the years. In the 1970s, productivity was the main focus, which shifted to quality in the 1980s. Since the 1990s, the emphasis has been on process improvement, redesigning, and restructuring to cope with the evolving competition and technology in the era of globalization. Ventraman (1994) describes the birth of BRP, where the initial effort aimed to align IT with strategy, beginning in 1984 during a research program at M.I.T. This led to significant results in the 1980s and 90s, and subsequent researchers, such as Mlay, Zlotrikova, & Watundu (2013), further refined the process through studying and evaluating outcomes. El Sawy (1997) identifies three important Cs in BRP: competition, change, and customers. These are the driving forces that prompt companies to adopt BRP, as they strive to meet customer needs, gain competitive advantage, and adapt to an ever-changing environment. Davenport & Harris (2017) and Hammer & Champy (1993) are regarded as the pioneers of BRP since they introduced and popularized the concept globally.

According to (Malhotra (2013), Business Process Research (BRP) involves the fundamental rethinking and radical redesign of business processes to achieve significant improvements in critical modern-day performance measures, such as cost, quality, service, and speed. Another definition of BRP comes from Davenport & Harris, (2017), who describe it as encompassing the envisioning of new work strategies, the actual process design activity, and the implementation of complex technological, human, and AL dimensions. Different authors offer varied interpretations of changes in business processes. For example, Blaug(2018) collected various approaches and noted that interpretations of business processes vary among authors. Hammer & Champy(2009) refer to it as the rethinking and radical transformation of overall processes to achieve enhanced

performance in terms of quality, cost, speed, and service, while Davenport & Harris(2017)define it as a process of considering and redesigning workflow.

Attaran & Attaran(2018) emphasize the reorganization and reconstruction of the structure, value chain, and workflow. Bradford & Burke,(2018) describe it as a coordinated and synergistic redesign of a firm's overall system and processes to enhance operations. O'Neil & Sohal(1999) argue that the focus of business process or change varies among researchers. Hammer (2016) refers to it as BRP (Business Process Re-engineering), while Davenport & Harris (2017) use the term BRP (Business Process Redesign), and Harrington(1991) use the term Business Process Improvement. Additionally (Burke & Peppard(1995) use the term Business Process Transformation. Throughout the discussions, it is evident that the authors understand the significance of BRP and approve of its outcomes, such as improved effectiveness and efficiency, increased production, and cost reduction. In essence, the primary component of BRP is focused on performance improvement and radical change. According to Creswell & Creswell,(2018), the concept of BRP dates back to the 1990s, enabling businesses to enhance relationships with customers, productivity, and the time taken to launch new products and services while maintaining high standards for quality, cost, customer satisfaction, and shareholder value in line with the company's strategy.

To prepare a firm for process redesign, process improvement, and radical re-engineering, it is crucial to examine the company's phases in alignment with the organization's processes. Similarly, Cao (2010) views BRP as a tool for cost reduction, productivity enhancement, improved customer satisfaction, and product quality. Additionally, (Ahmad, Francis, & Zairi, 2007) describes BRP as involving the implementation of radical (major) changes to satisfy customers, gain a competitive advantage, enhance service quality, and reduce costs. Between 2010 and 2020, there was a global spend of $2.2 billion on BRP, with an annual growth rate exceeding 46%. This signifies the urgent need for organizations to transform their operations in significant and dramatic ways. Furthermore, O'Neil & Sohal(1999) considers BRP as a strategic tool and asserts that companies must implement moderate changes annually and make drastic changes every five years to thrive in the current competitive environment. Hence, it is essential to study these techniques and

various schools of thought to identify areas of disagreement and agreement. The presence of multiple names and variations in this approach can confuse readers when it comes to BRP.

In their study, Bradford & Burke (2018) concentrate on presenting a comprehensive methodology for business process re-engineering (BRP). Their approach was designed to address the limitations of previous studies and models, as shown in table 2.1 (Furey, Timothy (2018), Harrison, Brian, Pratt, Maurice (2013); Manganelli, Raymond, Klein, Mark (2014), Mayer, Richard, DeWitt, Paula. (2017); Underdown, (2016)), and they introduced their own BRP model.

According to Mlay, Zlotrikova, & Watundu,(2013) BRP is a process aimed at achieving 10 times improvement, and it should not be used for minor enhancements in business processes.

Table 2.1 Studies on Consolidated methodology for business process re-engineering

Scholar	Suggested BPR Methodology
Furey, Timothy.R., (2016),	• Set Direction • Baseline and Benchmark • Create the Vision • Launch Problem Solving Projects • Design Improvements • Implement Change • Embed Continuous Improvement
Harrison (2013)	• Determine the Requirements of customers & objectives of the Process • Map and Measure the Existing Process • Analyse and Modify Existing Process Design a Reengineered Process: • Implement the Reengineered Process
Manganelli et. AL (1994)	• Preparation • Identification • Vision • Technical & Social design • Transformation
Mayer, et. AL (1998)	• Motivating Re-engineering • Justifying Re-engineering • Planning Re-engineering

	• Setting up for Re-engineering • As Is Description & Analysis: • To-Re Design and Validation
Under down (1997)	• Develop vision & strategy • Create desired culture • Integrate & Improve enterprise • Develop technology solutions

Table 2:2 Process simplification vs. Process Re-engineering

Process Simplification	**Process Re-engineering**
Incremental Change	Radical Transformation
Process –Led	Vision Led
Within Existing framework	Review Framework
Technology Improvement	Introduce new Technology
Assume attitudes and behavior	Changes attitudes and behavior
Management – Led	Director
Various Simultaneous Projects	Limited number of corporate initiatives

Mansor & Azudin (2018) emphasized the concept of redesign (also known as Business Process Redesign - BRP) as a less risky and more successful approach compared to re-engineering, despite the promises offered by the latter in the field of change. The authors developed a framework consisting of six major components, namely behavioral view, structure, customers, products/operation view, external environment, and population, to identify and highlight the best implementation practices in the field.

Additionally, the process simplification vs process re-engineering framework aimed at identifying the top ten BRP practices based on their frequency of use. These practices include elimination of tasks, task composition, integral technology, empowerment, order assignment, specialist-generalist roles, integration, parallelism, and numerical involvement (Wiersma, 2000). Wiersma (2000) presented his perspective on change, referring to it as a fashion where new trends emerge every year. He grouped various approaches, such as TQM, BRP, JIT, BSCs (balance scorecard), and other TLAs (three-letter acronyms), under the umbrella of ever-changing fashions in the field.

According to Martinez (1995), the rapidly changing business environment, increasing competitive pressure, and rising consumer demand make TQM (steady improvement)

alone insufficient for an organization's survival. Therefore, radical transformation becomes necessary. A common misconception about process redesign is that many organizations mistake it for BRP because it involves creating cross-functional teams and having a customer focus. In reality, process redesign aims to improve existing processes by removing cross-functional boundaries, which aligns with the principles of TQM. The key distinction between process redesign and previous methods lies in the use of I.T for development.

Moreover, BRP aims to achieve significant changes, including a 50% reduction in product development cycle, decreased delivery time, cost reduction of 60 to 80%, and simultaneous service improvement, 2009). BRP is considered radical and comes with high risk, time consumption, and cost, but it delivers dramatic results, as depicted in the figure below:

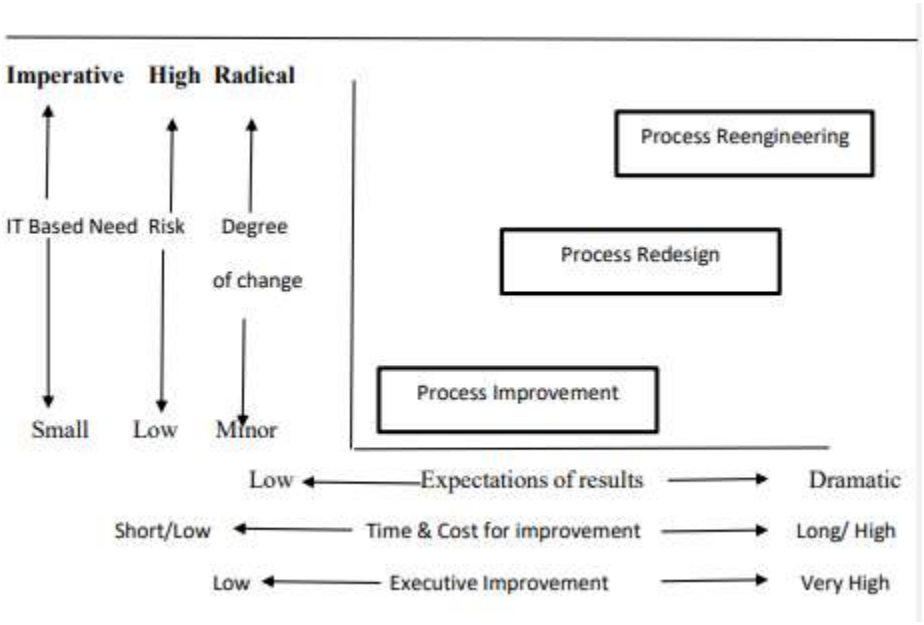

Figure 2.5 BRP DELIVERABLES SOURCE: KEITH GRINT (2017)

The failure rate for radical change, whether in BRP or TQM, ranges from 50 to 70%. Some authors suggest that BRP and TQM are not antagonistic but complementary, as they focus on changing behavior and attitude, creating a supportive environment for BRP implementation. TQM provides a cultural framework for BRP by emphasizing the transformation of behaviors and attitudes, fostering an environment conducive to adopting

BRP. When combined BRP and TQM can complement each other. For instance, BRP is management-driven while TQM is people-driven, BRP adopts a top-to-bottom approach while TQM is bottom-to-top, and BRP focuses on external pressure adaptation while TQM addresses internal issues. Thus, creating an internal environment and culture supportive of transformational change becomes vital. Various scholars present different methodologies and perspectives on BRP. For instance, Martonova, Surinova, & Paulova (2013) argue that there are inconsistencies between authors' perspectives on BRP. Some view BRP as a break with Taylorism, while others consider it a direct continuation of Taylorism. Some see it as considerably distinct from continuous improvement, while others refuse to distinguish between BRP and continuous improvement. Ozcelik, (2010) identifies four different identities for BRP: BRP as a management fad (BRP-F), BRP as a neo-Taylorist movement (BRP-N), BRP as a euphemism for downsizing (BRP-D), and BRP as a non-normative label for business process-oriented change efforts (BRP-P). BRP as a management fad (BRP-F) is derived from management consultancy and literature, and proponents like Peter Drucker, Hammer, and Champy believe that BRP is new and must be implemented. BRP as a neo-Taylorist movement (BRP-N) is considered a modified or new form of Taylorist movement, with a focus on integrating business processes and breaking down cross-functional boundaries. Unlike Taylorism, which prioritizes the division of labor, skills, and control, BRP shows no interest in these factors. Furthermore, while BRP emphasizes radical change, Taylorism-style change management and execution remain popular today.

Nevertheless, Neo-Taylorism exhibits characteristics like top-down streamlining of operations, a ready acceptance of conventional Taylorism solutions, and the belief that this leads to enhanced work content for employees. In organizations, Taylorism incorporates HR in decision-making processes and supports their roles. On the other hand, BRP-F (Business Process Re-engineering as a management fad) has essentially replaced TQM despite the significant differences between the two approaches (TQM involves subordinate control, while BRP does not). As a result, some managers who consider TQM ineffective have opted to adopt BRP. BRP-D (Business Process Re-engineering as a shorthand for downsizing) is of the opinion that BRP results in downsizing, either directly or indirectly (in certain cases ranging from 50-90%). This perspective traces its history back to times when firms were re-engineering even before the term "BRP" was coined. However, BRP

remains open to refinement and contributions, and there is a wide range of choices between incremental and radical change, with the involvement of the workforce (bottom-to-top approach) or without them (top-to-bottom approach). Therefore, whether BRP is seen as a continuation of Taylorism or as a distinct approach depends on the choices made by decision-makers.

To attain the research objectives, it is essential to comprehend the definitions and applications of BRP in both the public and private sectors. Therefore, the subsequent section will delve into how BRP is implemented in real-world scenarios, considering both public and commercial settings, and its impact on organizational performance.

BRP in Practice (Public and Private sector)

In their study, (Evdokimova & Llyin, 2016) investigated BRP projects and their applications in both the private and public sectors of the UK (United Kingdom). They selected a manufacturing firm from the private sector and two higher educational institutes from the public sector for their research. The number of staff involved during the planning of BRP varied among the organizations. In Fixico, there were 15 staff members, all of whom later participated in training and implementation. In Edu1, there were 12 members of staff during the redesign process, and in Edu2, there were 18 members of staff during the implementation phase. However, the time required for adaptation varied significantly, with Fixico's BRP process taking place from October 1993 to May 1995, Edu1's process from November 1996 to March 2000, and Edu2's process from March 2001 to January 2003. A common attribute observed in all these processes was the emphasis on cross-departmental interaction and the focus on increasing value for the end-users. Additionally, the models used in the BRP projects differed. For example, Fixico used IDEF0, which was designed by consultants, Edu1 used Data Flow Diagrams (DFD) with the help of their planning team, and Edu2 utilized flow charts that were designed by their internal planning team. Furthermore, process mapping approaches varied, with Fixico using a generic mapping method, and Edu1 and Edu2 using context-specific mapping techniques.

Fixico and edu2 employed BRP for radical change, whereas edu1 utilized it for incremental change. Consequently, the outcomes revealed considerable performance improvements in

Fixico and edu2, while no notable improvements were observed in edu1. Additionally, Fixico and edu2 made necessary structural readjustments to accommodate the radical change, whereas edu1 maintained its existing structure without any changes. Moreover, roles were redefined in Fixico and edu2, but not in edu1. Furthermore, the implementation time for BRP in edu1 was longer compared to the other firms in the study.

Archer and Bowker (1995) conducted an investigation demonstrating the significance and impact of BRP. They emphasized the importance of using BRP for radical change rather than incremental change and adopting it only when necessary. Moreover, they stressed the establishment and effective execution of employees' responsibilities once they are planned and communicated. However, the samples selected for the study were not as intended, as they were supposed to be either all from higher education or all from the production sector. On the one hand, the researchers proposed a five-step method for undertaking a BRP project, including the following: Prepare study, Analysis of current business processes, Redesign the processes, implement redesigned processes, and continuously improve the process. On the other hand, (Burke & Peppard (1995) suggested a four-step method, which involves having a vision, identifying and understanding the current business processes, redesigning the processes, and implementing the redesigned processes. The study's results indicated that the majority of businesses consider technology (IT) to be a crucial component of BRP. Furthermore, the research revealed several critical success factors for BRP projects, such as 100% staff participation, instilling process ownership, and clear vision communication. Additionally, 95% of process improvement teams included staff from various levels, 90% focused on installing a BRP culture, and 90% organized staff around the processes.

According to O'Neil & Sohal (1999), it is essential to correctly scope the re-engineering process. Project members should be empowered to make decisions that contribute to changes in management systems before implementing re-engineering projects. The changes should be aligned with available resources. The research design of this study is quantitative, and an online questionnaire was used as the data collection method. The sample consisted of top managers and project directors from Australian companies in both the public and private sectors. From the respondents, 69% stated that the decision to undertake re-engineering processes was primarily to minimize expenses. The second most

important factor was an increase in worker productivity (46%), followed by improvements in customer satisfaction (45%) as the third factor. Cycle time reductions were the fourth factor (36%), and defects reduction was the fifth factor (24%).

Hammer & Stanton (1994) proposed that for a firm to proceed with the re-engineering process, three factors' scores should be higher than 24, 28, and 18, respectively, with a total score exceeding 75. However, the results indicated that Hammer and Stanton had set their threshold scores quite high. In a two-tailed correlations test, all correlations between the four readiness variables were found to be significant at the 0.001 level, and the correlations with success were negative. Subsequently, linear regression was used, and the adjusted R-square values showed poor results: 0.097 for senior managers (n=132) and 0.028 for project leaders (n=95). This indicated that Hammer and Stanton's diagnostic variables are not reliable predictors of the success of re-engineering projects. Ozcelik (2010) conducted a study to identify the success factors of BRP in public and private sectors, utilizing previous studies to highlight the major elements required for the successful implementation of BRP in the public sector. The study was based on 67 previously published research papers (29 from the public sector, 16 from the private sector, and the rest were general studies). The selection of papers was not based on the number of citations but rather on the availability and relevance of the titles and abstracts. The findings of this study revealed five dimensions: [to be continued with the specific dimensions and relevant information:

1. Project scope: before BRP begins, its scope must be established alongside with the reasonable clear vision, goals and expectations.
2. Top management commitment: this factor is one of the most crucial of BRP in order for it to be successful.
3. Availability of resources: adequate resources (BRP know-how, I.T, and others) are also vital in order to achieve success of BRP.
4. Project management: is crucial the implementation phase of BRP (predominantly process analysis and suitable implementation mapping)
5. Change management: the effectiveness of the change process is solely dependent on change management.

Sub-categories of these dimensions are shown in figure 2.3 below. According to Grint and Willcocks (2015) findings, top management commitment and support is the central dimension.

Table 2.3 Overview of BRP

Project Scope Realistic expectations and clear vision and goals
Top level management commitment
Resources BRP Know-how I.T Use and adoption of I.T
Project Management Process Analysis Implementation map/Concept Flexible and adaptive technology Plan execution and continuous control Training new skills Cooperation and Communication

After conducting a detailed analysis, Grint and Willcocks (2015) found a notable difference in the approaches of BRP projects between the public and private sectors. This difference is a major factor contribution to the varying success rates observed in both sectors, as depicted in the figure below. Based on the identified dimensions in different industries within the public and private sectors, Grint and Willcocks (2015) put forth five propositions for the successful implementation of BRP in the public sector:

Proposition 1: Public firms are less likely to initiate efforts of BRP,

Proposition 2: Private and public firms derive various benefits from BRP projects.

Proposition 3: Efforts of BRP must be initiated top-down in order to guarantee economic as well as political support and feasibility.

Proposition 4: A small-scale approach to BRP will escalate the rate of success of BRP endeavors in the private public sector.

Proposition 5: Sharing of experiences and knowledge through trans-institutional knowledge management platforms would have a positive impact on the execution of BRP in public administrations.

Table 2.3 A comparison of BRP as implemented in the Public and private sectors

Source: (Grint & Willcocks, 2015)

Dimension	**Situation in the Private sector**	**Situation in the Public sector**	**Consequences for public BRP initiatives**
Functions and intentions	-Pursuit of business profit and growth -Aligned IT and business strategy -Part of a mostly vertical supply	-Execution of laws and policies -stability and risk aversion - controlling of compliance with laws - concept of legalism -part of a mostly horizontal chain	Radical changes, frequently unforeseeable - BRP must be verified by legal compliance
Processes	-Process initiated by customer -Customer – supplier relationship -Full control over own process structure	-Process based on legal regulations, laws and policies -Little control over process structure	-BRP as a top-down process -Radical changes frequently unforeseeable - BRP must be verified by legal compliance

Organizational structure	-Company size and structure highly variable -Affinity to recruiting -Different authority and autonomy levels	-Mandatory tasks and responsibilities -Management under political observations -Rigid Hierarches	Formal decision making - Top-down support as a prerequisite - Need for approval by all stakeholders involved - Involvement of all stakeholders across depts. Is challenging -Insufficient exchange of experiences regarding past BRP projects between administrations (ample potential for trans-institutional knowledge management platforms

Table 2.4 Continued

Dimension	**Situation in the Private sector**	**Situation in the Public sector**	**Consequences for public BRP initiatives**
Economic Feasibility	Freedom in allocating funds and controlling investments . Accountable to shareholders Motivation to minimize costs	-Fiscal Limitations -Predefined resources -Governmental Authorizations . -Actions are subject to public scrutiny (Public Accountability) -Motivation to keep costs within budget (Budget functions as a threshold value)	-Inflexible financial budgets - Resources (Know how, IT etc.) tend to be limited and may cause failure during the early stages of the project - Acceptance of BRP efforts questionable once budgets are met and cost pressures decrease
Political feasibility	-No dependencies -Internal financing -Consultation and agreement with cost centers (internal prices)	-Strict governmental and political restrictions -Feasibility of changes and amendments to the laws and guidelines	-Proposed changes might face resistance by decision makers and other stakeholders (especially when cross functional

			departments are involved) -Political feasibility should be ensured early in the process as laws and regulations may prohibit planned measures
Expectations from BRP	-Increase business volume -Obtain market leadership - Cost Savings	-Efficient use of resources - Identify redundancies in order to automate processes - Alleviate cost of bureaucracies and cut down red tape	-Customer perspectives matter, yet does not represent the primary concern

Grint & Willcocks (2015) found that while BRP in the public sector shares similarities with the private sector, there are distinctions in the specific situations and reasons driving the adoption in each sector. The study did not introduce groundbreaking discussions, but it did highlight cases where public sector firms directly compete with private sector entities. For instance, companies like Pakistan International Airline (PIA) and Pakistan Steel Mills were examined, and it was concluded that these public companies needed to implement BRP approaches similar to those adopted by the private sector. As a result, further research is necessary to validate the propositions derived from previous studies, including this one.

2.8. Effect of BRP on Firm Performance

Business process re-engineering involves a complete overhaul of an organization's operations to enhance profitability, productivity, efficiency, and other performance metrics, as determined by its leadership. Bhaskar & Singh, (2014) argue that BRP is the most fundamental approach used by organizational leaders when they recognize the need for change in order to meet customer demands effectively. According to Anand, Chandrashekar, & Narayanamurthy (2014), BRP is a radical measure that should be implemented when an organization is facing a crisis or experiencing significant underperformance. Many organizations have implemented various reform measures to improve performance and gain a competitive edge, both locally and globally. To ensure their survival and success, businesses often adopt innovative strategies. In this context, business process re-engineering (BRP) is considered a proposed strategy to enhance overall performance. Although BRP has proven to be successful in helping organizations that require transformation, its potential applicability to TAZAMA was uncertain. Hence, this research aimed to determine the impact of BRP on the firm performance of TAZAMA.

Since the 1990s, business process re-engineering (BRP) has emerged as a widely adopted management approach that allows organizations to introduce transformative changes by innovating their processes. According to Bradford & Burke, (2018), BRP entails a radical redesign and rethinking of business processes to achieve significant improvements in essential performance measures like service, quality, cost, and speed. On the other hand, Addolvand, Albadvi, & Fedowsi (2008) define BRP as a form of business process improvement. BRP can be considered the core of process improvement, process innovation, business process redesign, re-engineering, business process management, and redefining the business scope. Therefore, BRP involves a comprehensive overhaul to enhance productivity. Given the challenges faced by TAZAMA over the years, this research was conducted to investigate the potential benefits of employing BRP to unlock the company's full potential.

Attaran & Attaran, (2018) highlight the diverse impact of BRP on different levels within an organization. For example, companies like IBM achieved substantial improvements in

expenses, turnaround time, and quality through re-engineering their finance process, but the overall impact on the company's success was relatively limited. Hence, it can be inferred that the definition and implications of BRP may vary depending on the specific context of its application. Since the understanding of BRP's potential impact on TAZAMA was unclear, the study aimed to uncover its significance for the company.

Therefore, the primary aim of BRP is to gain a competitive advantage for an organization, regardless of the sector in which it is implemented. This suggests that BRP aims to assist organizations in accomplishing their goals and objectives effectively when applied appropriately. According to Metz & Attong (2012), significant change is a prerequisite for progress as it aligns with an organization's objectives and vision, influencing its strategies and actions. As a result, organizations may undergo radical and dramatic process restructuring to enhance quality, cost, and overall performance, leading to improved effectiveness and efficiency. This study provides an accurate depiction of the potential impact of BRP on TAZAMA if implemented.

BRP plays a crucial role in establishing a sustainable competitive advantage through radical improvements, which are contingent upon three factors: firstly, highly segmented and diverse customers who demand consultation and personalized services; secondly, intensified competition that strives to meet the specific needs of customers in various niches; and finally, persistent, pervasive, and rapid changes that have become a prerequisite in today's markets. With the implementation of BRP, organizations are adapting to a new business landscape, one that is tailored to effectively address the demands of customers, competition, and the rapid pace of change in the market. Drucker referred to this era as the 'Age of Discontinuity,' where traditional assumptions of business built on mass production, growth, and stability no longer hold true. Instead, flexibility and quick responses are now essential to thrive in this dynamic environment, posing a challenge to the traditional business mindset.

O'Neil & Sohal (1999) conducted a study on American companies like Mutual Benefit Life, Ford, Detroit Edison, and Xerox to explore the impact of BRP. The results revealed significant and radical changes that led to increased productivity. These transformations

were brought about through various consultant programs that emphasized the redesign of business processes to enhance quality through process control. Additionally, companies embraced BRP to adapt to economic pressures, ensuring flexibility and responsiveness. The productivity paradox effects, along with the popularity of articles and books on BRP, further contributed to the widespread adoption of BRP, with consultants repackaging the results to promote its aggressive implementation.

Organizations need to understand the fundamental objectives of BRP, which involve addressing operational challenges concerning performance, service, productivity, quality, and cost. BRP entails questioning and reshaping the existing business practices, necessitating the identification of re-engineering opportunities, effective management of the re-engineering process, risk assessment and control, and maximizing the benefits and organizational changes to achieve improved performance. (Grint & Willcocks, 2015) Outlined a five-step approach that can facilitate successful BRP implementation.

1. A five methodology steps to Business Process Re-engineering

2. Develop the process objectives and vision of the business

The BRP method is driven by a business vision, which implies specific business objectives such as cost and time reduction, output quality improvement.

3. Identify the business processes to be redesigned

The "high impact" approach which focuses on the most procedures that are crucial or those that clash with most of the company's goals is the mostly used by majority of the businesses. Few businesses adopt the exhaustive approach" which aims to list all the procedures that are used within an organization and ranks them according to how urgently they need to be redesigned.

4. Understand and measure the existing process

When the exiting process is understood, there is avoidance of repetition of old mistakes and also there is a provision of a baseline for future improvements.

5. Identify IT levers

Before the implementation on BRP in any given, it is imperative to establish the IT awareness because this will determine the great extent and influence the success and implementation of BRP.

6. Design and build a prototype of the new process

The BRP process should not be viewed as complete until the creation of final design. Instead, it ought to be seen as a prototype, with consecutive iterations. The Business Process Re-engineering approach is aligned with regard to quick delivery of results, and the involvement and customer satisfaction.

According to Hammer & Champy, (2009) it becomes evident from these steps that BRP's core principles revolve around enhancing performance. The objective is to redesign organizational operations by emphasizing value-added content and minimizing other aspects. BRP can be applied at both individual and group process levels. The organization must be prepared for changes to its existing procedures and be willing to embrace the defined modifications. However, it remains unknown whether these steps yielded the desired outcomes at TAZAMA, which is why this research was conducted.

O'Neil & Sohal (1999) assert that BRP is highly regarded due to its potential to bring about significant changes with minimal effort, which is crucial for organizational survival. Compared to other management approaches, BRP is less complex as it involves adjusting processes to enhance corporate capabilities and seize market opportunities, ensuring organizational growth through continuous improvement. Al-Mashari, Irani, & Zairi (2001) also mention in their study that BRP addresses the pressure to improve standards and competitiveness within the company. This entails eliminating outdated processes and introducing new ones that need to be integrated into the workflow. Given that TAZAMA has been in existence for a long time and in need of reforms, this research was essential to investigate the positive changes brought about by BRP implementation.

Ahmad, Francis and Zairi (2007) emphasize that Business re-engineering involves restructuring and redesigning of business processes, with a focus on removing non-value-adding processes and introducing value-adding ones through automation, renovation, and networking. During the re-engineering of business processes, it is essential to identify and improve fewer effective processes. This study provided insights into the current situation at TAZAMA, comparing it to the existing literature.

The Central Bank of Nigeria (2008) conducted a study in Abuja, analyzing the daily operations' impact on the performance of Nigerian banks. The research confirmed that BRP has become an effective tool for companies aiming to continuously improve their performance. However, Bradley (1994) later conducted a similar study, which found that BRP projects significantly improved profitability but did not lead to an expansion of financial performance. In contrast, Bradley (1994) developed and tested a model that assessed the influence of BRP on the overall performance of state enterprises. The results indicated that public enterprises can utilize BRP to enhance their performance. These enterprises have also acquired BRP-relevant capabilities and resources, implemented BRP with sufficient depth, initiated post-BRP complementary competencies to sustain and further improve the BRP changes, and successfully addressed all negative consequences of BRP implementation challenges

Research findings indicate that effective implementation of BRP can lead to enhanced customer satisfaction, increased flexibility in business processes, improved integrity, and heightened productivity, resulting in a competitive advantage for the organization. A case in point is provided by Hammer & Champy (2009) who demonstrated that BRP implementation at the Mazda production plant significantly reduced the number of staff required for accounts payable compared to the Ford production plant, which still needed 400 accounts payable officers to perform the same function. Ford initially tried to improve speed through computerization but encountered inefficiencies. However, after re-engineering the process, significant improvements in productivity were achieved, representing a radical change. Given the unknown situation at TAZAMA, this research was undertaken to explore the impact of BRP implementation.

Mophatra(2013) purports that BRP is a comprehensive approach that completely transforms a company's operations to achieve overall performance improvement in areas like costs, efficiency, speed, quality, and prices. In the rapidly evolving global environment, marked by technological advancements and intense competition, making necessary adjustments becomes crucial for increasing productivity and achieving set goals. Effective planning and adaptation to the BRP agenda can lead to positive outcomes, such as enhanced efficiency, productivity, and cost reduction. Additionally, Patton (2018) defines BRP as involving radical redesign of business processes, leveraging information technology to enable new processes, aiming for AL-level strategic outcomes, and taking an inter-functional approach. However, whether these characteristics apply to TAZAMA was unknown until this research was conducted.

Hammer and Champ's methodology is widely used in many corporate processes as a standard approach for BRP. However, current trends show that Davenport's methodology is gaining popularity due to its emphasis on IT as a primary driver of change. Nevertheless, caution has been advised by scholars like Patton (2018) regarding the application of BRP to all business situations, as each business has its unique and unforeseen elements that may impact the process differently. (Anand, Chandrashekar, & Narayanamurthy (2014) also agree with this caution and suggest the use of the "door-to-door" mapping process to identify relevant sub-processes eligible for improvement, focusing on enhancing utility. This approach aids in pinpointing high-value activities and areas that need improvement within the business process.

As mentioned earlier, Attaran & Attaran, (2018) further elaborate that the origins of re-engineering can be traced back to IT, but it later evolved to place more emphasis on the change management process while still pursuing rapid and radical improvements in overall business approaches. The relationship between IT and BRP is such that IT serves as an enabler, and BRP should be implemented within the capabilities of IT. IT plays a role in enhancing speed, data storage and retrieval, process regulation, quality improvement, monitoring, decision-making support, and supporting work functions, making it a valuable tool in facilitating the execution of BRP.

According to Davenport & Harris,(2017), IT can be utilized in various activities related to BRP, such as identifying and selecting procedures for redesign, choosing enablers for the current process design, defining the process vision and business strategy, understanding the current process operations and structure, prototyping the current process, executing the process of current systems, communicating ongoing initiative results, and building commitment toward the solution at each step. While many scholars acknowledge that IT serves as a significant enabler for BRP, it remains uncertain whether this is applicable in the current situation at TAZAMA, hence the purpose of this research.

The primary focus was on improvement and innovation, entailing the redesigning of procedures and cost minimization to enhance the quality of customer service. IT played a crucial role in BRP, being a fundamental element in the contemporary corporate landscape and serving as a vital tool for business process re-engineering.

The use of IT is a significant aspect of BRP as it facilitates further improvements and supports process management and redesigning. IT plays a crucial role in BRP by effectively automating manual processes. It also offers the added advantage of enabling businesses to operate in various locations and providing better customer service through quick and paperless transactions. According to Harrington (1991), having IT experts is essential for businesses to implement BRP quickly, as technology helps fulfill business obligations and reduces time cycles. Murray and Lynn (1977) have concurred with Motwani, Kumar, Jiang, and Youseff (1998) in recognizing IT as an important element of BRP that enables radical changes compared to other methodologies.

El Sawy (1997) suggests that IT brings new benefits to business operations and can serve as a tool for cross-functional changes in the business process. IT mechanisms can reduce the complexity of AL and enable extensive changes to occur. However, genuine change requires individuals who are well aware of the objectives and possess technical IT expertise to achieve successful outcomes. Attaran & Attaran, (2018) also support the notion that IT plays a critical role in driving improved business performance and executing the business strategy. As the financial markets undergo rapid development, the competence of IT

becomes the backbone in enhancing business processes like BRP. The study's findings shed light on how technology influences the implementation of BRP at TAZAMA.

Kayo's (2014) study conducted in Japan aimed to enhance the effectiveness of ERP system implementation. The study found a strong link between the success factors of BRP and ERP, particularly in terms of IT-related implementation success, as the BRP framework is utilized to establish new business resource systems. Three primary factors contributed to the successful implementation of ERP through BRP. The first Critical Success Factor (CSF) is the readiness to undergo a significant shift brought about by the new process. The second factor is the competency of the project manager in goal-setting, communication, and IT training. The third element is satisfaction with cooperation, but this is only considered a successful factor when operational satisfaction is achieved. Ultimately, the study revealed that IT plays a crucial role in the successful implementation of ERP through BRP.

In an Indian College University, Natarajan (2019) conducted a study with the objective of highlighting the significant role of BRP in meeting the demands of IT system users and other library software. The success factors of AL restructuring were found to be closely associated with human elements. Several Critical Success Factors were identified, all of which were linked to human factors. These factors encompassed inclusive management, training, empowerment, effective communication, and a strong AL culture with a high tolerance for transition. The study focused on investigating the effects of the Re-engineering process at the University.

The main factor contributing to resistance in BRP and the implementation of new IT in Africa is the reluctance to change. For instance, the research conducted by Mlay, Zlotrikova, and Watundu (2013) demonstrated that the resistance to adopting new IT software was attributed to users' lack of competence, cautious leadership in investing in new IT projects, and concerns about potential job layoffs resulting from the new initiative. In Africa, failures have been linked to human factors, indicating that the project should involve the entire organization and promote open communication at all levels (Hammer &

Champy, 2009). The current situation at TAZAMA was unknown, which prompted the need for this study.

A case study conducted on Indo Zambia Bank revealed that the bank had undertaken a project involving Business Process Re-engineering and the upgrade of Core Banking from Flexcube 7.3 to Version 12.x (Indo Zambia Bank, 2017). This initiative was aligned with the bank's technology-focused initiatives, which aimed to enhance customer service delivery and agility. The implementation of BRP was expected to enable the bank to offer convenient banking services to its customers 24/7 through an upgraded Core Banking Solution platform integrated with various delivery channels such as ATM, Internet, Phone, Mobile, E-mail/SMS, Kiosk, and Call Centre. The study emphasized that customers' needs have evolved, necessitating corporations to respond to these dynamic customer demands.

The bank's BRP strategy involved the implementation of appropriate middleware, hardware, and database upgrades, along with procurement solutions to ensure smooth business operations in the future (Indo Zambia Annual Report, 2014). The study identified that the main challenge to BRP implementation was the lack of effective vertical communication and resistance to change by middle managers, particularly between marketing and procurement departments. Although the process was ultimately successful, it took a considerable amount of time to be fully implemented and understood by certain departmental heads. The findings of this study shed light on the current situation at TAZAMA.

In their book Bwalya et al. (2014) aimed to explore the factors influencing the proliferation of e-government at both the macro and micro levels of the socio-economic hierarchy in Zambia and the necessary steps to achieve that. The study emphasizes that there is much to be accomplished for e-government, as implemented in Zambian Ministries, to succeed.

The authors pointed out the lack of awareness regarding the structure and objectives of e-government. They argue that without proper training and education as tools or techniques, the implementation of e-government through BRP will face obstacles.

2.10 Impact of Individual skills on implementation of Business Re-engineering Process

2.10.1 Staff Skills and Competencies

(Skowron, Gasior, & M) 2014) define competency as a combination of personal skills, measurable abilities, and knowledge that, when integrated, enhance employee performance and contribute to the organization's success. Having competent employees is crucial for gaining a competitive advantage. It is not the physical assets like buildings, land, or materials that affect the productivity of an organization, but rather the "human capital" that creates value from existing resources and drives the organization. Competent and skilled employees are invaluable as they represent a sustainable source of differentiation that competitors cannot easily replicate. The research aims to determine whether the staff at TAZAMA possesses the necessary competencies and skills for the organization's success.

(Unnington, Menter, & Chris (2017) propose that human resources are the most crucial factor for organizational success, and having competent and productive employees is essential. In their research conducted in Belgium mines, they found that individual skills and competencies played a significant role in the successful implementation of BRP in the mining sector. The performance and success of both employees and the organization depend on the employees' competencies, which help the organization achieve its objectives. Competencies provide employees with a clear understanding of the desired actions and behaviors valued, recognized, and rewarded in the workplace. To fully grasp the concept of competencies, the study suggests defining various components of competencies.

2.10.2 Knowledge

This is the understanding of truths, facts and principles that are obtained from experience formal training. Application and sharing of one's knowledge base are critical to individual and all successful organizations.

2.10.3 Skill

Specialized training can enable one to develop a talent that results into successful performance. Ability is the capacity to carry out mental or physical tasks that can be frequently related to a particular career trade or career, such as plumbing, computer programming or calculus. Although a firm may have the skill of evaluating the performance of employees in terms of skills, knowledge and results, they could frequently fall short in recognizing the strengths of employees particularly those out of their conventional work design.

Acquiring specialized training can lead to the development of talents that ultimately result in successful performance. Abilities refer to the capability to perform mental or physical tasks that are often associated with specific trades or professions, like plumbing, computer programming, or calculus. While managers may possess the skill to evaluate employees based on their skills, knowledge, and performance, they often struggle to recognize the strengths of employees that go beyond their traditional job roles.

Individual attributes are characteristics, traits or features of individuals that reflect a particular person’s personality. Individual attributes are regarded as inherited of learning experiences throughout one's life. Despite the fact that personal attributes are the most arbitrary of the factors, a rising and sizeable body of research related certain personality traits to effective individual and AL performance. Individually rewarding and recognizing any of these sources of expertise provides a strong basis for individual performance engagement. However, it is their combination that results in the unleashing of resources that are all too frequently untapped.

Individual attributes encompass the distinctive characteristics, traits, and features that are reflective of a person's personality. These attributes are shaped by a blend of inherent traits and experiences gained throughout one's life. Although personal attributes may seem subjective, there is an increasing body of substantial research linking specific personality traits to successful individual and organizational performance. Acknowledging and rewarding these diverse sources of expertise lays a solid foundation for individual

engagement and performance. However, it is their harmonious combination that unlocks a reservoir of resources that often remain underutilized.

It is vital to keep the following in mind, when utilizing competencies:

Competencies are employed to enhance employee performance rather than merely establishing a baseline for organizational performance levels. Employees are provided with clear pathways to progressively improve their competencies. These competencies underscore the values and culture of the organization. To support this objective effectively, TPL has chosen a distinct set of skills. According to Cunnington, Menter, & Chris, (2017), competencies reflect the organization's strategy and are aligned with both short- and long-term tasks and objectives. They prioritize the process of achieving results over the final outcome, bridging the gap between employee performance management and development, and serving as a pivotal aspect of personal growth. Competency data can be utilized for training, employee development, promotion, compensation, and new hire selection decisions that align with the overall company strategy.

2.10.4 Strategy

A strategy is a blueprint for accomplishing the goals and objectives of a business. It profoundly influences the core aspects of the business, including its target market, customer service approach, and internal processes. When a company undergoes a strategic transition or change, it is challenging to predict the exact outcomes, but it is common to experience both positive and negative effects. According to Hasan & Andaleeb, (2016), a strategy outlines how an organization will successfully achieve its long-term objectives. Therefore, it is of utmost importance for management to carefully determine the strategy in a company, as it involves significant resource commitment, and once implemented, it becomes costly and difficult to alter.

According to Hasan & Andaleeb (2016), effective strategies allow companies to make informed decisions regarding their investments and resource allocation. It provides guidance on prioritizing project tasks and optimizing resource usage, leading to above-average profits and returns.

In summary, Strategic Restructuring involves a reassessment of the strategic environment, where senior management considers the company's operations in terms of procedures. The efficiency and effectiveness of fundamental processes are evaluated based on their impact on customers, redesign feasibility, and alignment with company objectives. Identifying which crucial processes require redesign and developing a future operating model is essential. A project team is assembled to conduct process mapping analysis, creative redesign, and phased implementation planning. The project is launched, and the advantages of the new design are communicated to employees.

Targets are established, and procedures are defined based on the desired outcomes outlined in the strategy. The strategic plan acts as the driving force for the entire process, and the chosen process compels a reassessment and refinement of the strategy when new opportunities arise or a deeper understanding of capabilities and customer needs is gained. Re-engineering aims to develop new business capabilities that facilitate the effective implementation of the new strategy. The first step in successful strategy implementation is the technical redesign of strategies. On the human side of re-engineering, it is crucial to comprehend the impact of the process on the "social contract" within the organization, address key aspects of transition and change management, understand how people adapt to new realities, and consider cultural factors that may hinder or facilitate this change (Ventraman, 1994).

Hence, it is essential to adopt and implement a change management technique that is carefully chosen during the initial stages of formulating re-engineering strategies. BRP cannot function in isolation without considering or incorporating any of the well-established mainstream change management methodologies as guidance or support. Prior to this study, the impact of employees' skills on the implementation of BRP at TAZAMA was unknown. Therefore, the research findings shed light on the current situation at TAZAMA

2.10.5 Macroeconomic Environment

The macro-environment, which encompasses a broader scope, refers to the economy as a whole. It influences the performance, operations, decision-making, and overall strategic

development of all company sectors simultaneously. Being highly dynamic, businesses must continuously monitor its developments. This environment includes external factors that are beyond a company's control but significantly impact its operations. Components of the macro environment include demographic forces, economic factors, natural and physical forces, technological factors, political and legal forces, and social and cultural forces (Levi, 2014). Macroeconomic factors have a significant impact on businesses, leading to market fluctuations. Consequently, businesses often conduct macroeconomic research to maintain competitiveness and navigate economic shifts, utilizing the findings to inform crucial company decisions.

2.10.5.1. Macro-environment factors

Economic factors play a significant role in influencing two vital aspects: customer decision-making and the production levels of the company. Within the economic environment, several factors can impact the operations of TPL, such as exchange and interest rates, inflation, recession, taxes, and the demand/supply of oil.

2.10.5.2. Interest Rates

Interest rates, as a crucial macroeconomic factor, significantly influence the success of businesses. Those companies that obtain loans are particularly susceptible to fluctuations in interest rates. Many businesses in the market rely on borrowing business loans to expand their operations, making them highly sensitive to interest rate changes. To ensure their financial stability, businesses must conduct thorough macroeconomic research. Failure to adequately prepare for interest rate fluctuations can lead to poor financial outcomes for these companies. As interest rates rise, businesses incur higher expenses, which can affect their overall financial health. TPL is also impacted by this macroeconomic factor since the company borrows from International Banks.

2.10.5.3 Inflation

Inflation affects businesses across various industries in several ways. It relates to the money supply in the economy, the rise in prices of goods and services, and the overall cash flow within the economic system. As prices of goods and services increase, the purchasing

power of the nation decreases proportionately. Consequently, businesses are compelled to raise the prices of their goods and services to maintain profitability. On the other hand, deflation occurs when prices of goods and services decline, resulting in an increase in the purchasing power of customers. This leads to increased sales for businesses as customers can buy more products and services during such periods (Levi, 2014).

2.10.5.4. Economic Growth Rates

The economic growth rate is a macroeconomic factor that significantly affects businesses. It can be measured using indicators like Gross National Product (GNP) and Gross Domestic Product (GDP) (Blaug, 2018). When the economic environment undergoes changes in sales rate, businesses need to adapt their strategies accordingly. Moreover, businesses themselves contribute to the overall economic growth rate, allowing them to capitalize on increased demand and customers' willingness to make purchases. In response to this, business owners often increase the number of employees in their organization to outperform their competitors whenever possible. As a result, the economic growth rate as a macroeconomic factor has a considerable impact on businesses (Blaug, 2018).

2.10.5.5. International Trade

Conducting macroeconomic research is one of the activities businesses undertake to stay informed about developments in international trade. This macroeconomic factor has a significant impact on a business, especially if it is currently involved in selling and shipping products overseas. However, even if a company has not yet expanded to international markets but has the intention to do so; this component still affects its success. Typically, companies experience substantial growth rate when they decide to venture into international trade. However, if the desire for free trade agreements diminishes, the chances of growing their companies into international corporations decreases as well. Therefore, this macroeconomic factor affects both large enterprises and smaller companies attempting to scale their brands (Bradford & Burke, 2018).

2.10.5.6. Natural and physical forces

Conducting macroeconomic research is one of the activities businesses undertake to stay informed about developments in international trade. This macroeconomic factor has a significant impact on a business, especially if the company is currently involved in selling and shipping products overseas. However, even if a company has not yet expanded to international markets but has the intention to do so, this component still affects its success. Typically, companies experience substantial growth rates when they decide to venture into international trade. However, if the desire for free trade agreements diminishes, the chances of growing their companies into international corporations decreases as well. Therefore, this macroeconomic factor affects both large enterprises and smaller companies attempting to scale their brands (Anand, Chandrashekar, & Narayanamurthy, 2014).

2.10.5.7 Political and legal forces

The market's evolution is shaped by the legal and political environment, which varies across different regions. As a result, businesses must stay informed about these global forces to make informed decisions. Legal factors, including employment law, health and safety regulations, and import/export laws, can affect TPL due to its bi-national ownership.

These factors impact the expertise and knowledge applied in production, as well as the technology and resources required to manufacture a product. They also influence various operational aspects, such as the maintenance trolleys utilized by a company like TPL to preserve its tools and equipment. Technological factors like internet connectivity, automation, pump power/speed for oil transfer from Tanzania to Zambia, and engine performance and efficiency also play a crucial role in shaping business operations.

2.11 Technology

IT is considered an enabler of Business Process Re-engineering (BRP), and this section explores the literature on this subject, as it plays a vital role in automating tasks. According to Anand, Chandrashekar, & Narayanamurthy (2014), IT has the potential to enhance the quality of goods and services, improve operational effectiveness, increase productivity,

reduce expenses, and provide better services in the public sector. However, Reyes notes that despite substantial investments in IT, the expected results may not always be achieved, leading to BRP's unpopularity in the public sector.

IT plays a crucial role in the redesigning process, enabling automation and enhancements across functional processes (Grover & Malhotra, 1997). It aids in various aspects of BRP, such as process identification, redesign, defining business strategy, prototyping, implementation, communication, and commitment building (Anand, Chandrashekar, & Narayanamurthy, 2014). IT offers several benefits, including time-saving, increased accuracy, cost reduction, and gaining a competitive advantage (Ventraman, 1994).

To be successful in BRP, the IT component must meet specific requirements, including alignment with BRP strategy, sufficient funding, integration with information systems, and effective use of software tools (Anand, Chandrashekar, & Narayanamurthy, 2014). However, IT faces challenges related to infrastructure, such as a lack of experienced IT staff, insufficient infrastructure, non-compatibility with information systems, and failure to utilize IT as an enabler.

El Sway (1997) highlights that IT plays a complementary role in process redesign and is crucial in analyzing, defining, eliminating non-value-adding activities, implementing improvements, and monitoring the execution of redesigned processes.

BRP triggers multiple transitions, requiring a structured methodology encompassing various essential components, including strategizing, feasibility analysis, process analysis, understanding customer requirements, performance measurement, and implementing AL change (Hammer & Champy, 2009).

Change management is essential during BRP, especially when dealing with institutions that have not undergone BRP. The project team must foresee and manage the organization's reactions to the new processes (Bhaskar & Singh, 2014).

2.11.1. Selection of the Management and Implementation Strategy for BRP

The first critical step in implementing a change management methodology such as BRP is the formation of an execution strategy. The implementation strategy provides direction for informed decision-making and brings the project or change to life, describing who and how it will impact the execution strategy.

The BRP management strategy contributes to the formulation of the change management plans recommended by change management best practices. For instance, communications of plans should be directly addressed to groups that were defined in the strategy. The sponsorship road map includes processes for establishing and maintaining coalition mentioned in the strategy. An effective execution BRP management and execution strategy informs transition strategies of management and initiatives. This section aims to demonstrate the significance of strategy in BRP and the ineffectiveness of "one-size-fits-all" strategy for change management and precisely for any BRP. An example is a project of implementing an ERP solution.

These are all diverse changes; and in order for each of them to be effective, a change management must be selected. Each strategy has an impact on people and how they carry out their tasks. Each of them can suffer from low utilization and slow adoption. Each has risks associated with people not resisting the change and choosing not to be involved. For the implementation of BRP change management to be successful, the right strategy change management will vary. Change management strategies specify the methodology required to manage change given the unique situation of your project. According to Sturdy & O 'Mahoney (2018), below are the three steps to creating a change management strategy in relation to the implementation of a BRP:

2.11.2 Identify Change Characteristics

How big is the change? Who will it affect? What is the timeline and does it compete with other initiatives? These are some of the questions that an organization will answer in readiness for implementing BRP strategy. Changes can be formalized projects, strategic

efforts or even gradual changes to how the organization operates. Understanding the characteristics of the transition needs management to answer questions like:

What is the scope of the change? How many people will be affected? Who is being impacted? Are people being affected in a similar manner or are they experiencing change in various ways? What is being changed (processes, systems, job roles, etc.)? What is the time frame for the change.

2.11.3 Assess the extent of the Change

Before selection every strategy requires to critically undergo assessment. This includes all characteristics that relate to the past and culture in the organization while describing the background against which this specific transition is being introduced.

What is the perceived need for this change among employees and managers? How have past changes been managed? Is there a shared vision for the organization? How much change is going on right now?

2.11.4 Impacted Groups

The last phase in the evaluation process is creating a strategy that shows who is impacted by the transition and how they are being impacted. A single change, such as the execution of a web-based expenditure reporting program, will have distinct effects on various groups: Personnel who do not need to disclose expenses will not be impacted at all. Travel by staff every three months may be only slightly impacted. Although filing costs only make up a small portion of their day-to-day work those that are usually mobile will be affected as their roles will be altered completely. Streamlining the affected groups and how they will be affected allows precise and customized strategies later in the change management process.

2.11.5 Create a Change Management Strategy

Effective execution of BRP needs a thorough look at team structure, sponsor model, special procedures and assessment of risks. Without these components, it will be very challenging to generate and execute the BRP for a successful project.

2.11.6 Team Structure

The BRP management team structure identifies who will be doing the change management work. It outlines the relationship between the project team and the change management team. Frequent team structures include: (Sturdy & O'Mahoney, 2018) A change manager who can be embedded into a project team, centralized change management team supporting a project team and change management being a responsibility assigned to one of the project team members. The key to a team structure is to be specific when allocating change management tasks and assets.

2.11.7 Sponsor Coalition

According to Sturdy & O'Mahoney (2018), the sponsor coalition outlines the managers and leaders that must be active and support the drive of change. The primary sponsor is the person who approves and advocates the transformation. This person must be actively involved throughout the transition of an organization. They also need to be involved in structuring a coalition of sponsors across the organization. When creating the sponsor coalition, the selected individuals are the managers of the groups affected by the alteration.

2.11.8 Special Tactics for Anticipated Resistance

Within the strategy as a whole, there must be a need to account for potential resistance to any transitions that may arise. Many times, members of the team think back after a proposal is made and encounters opposition that they could have predicted that reaction. In producing a strategy for BRP, this indicates areas where opposition can be expected: Are particular regions or divisions impacted differently than others? Were some organizations advocating a different solution to the same problem? Are some groups heavily invested with how things are done today? Noted are particular anticipated resistance points

depending on how each group is related to the change. Once this opposition is identified, they can plan special strategies to overcome it before it begins.

2.11.9 Project Risk Assessment

The risk of not properly managing the people on a particular project is related to the dimensions described in the transition attributes and AL attributes sections above. Changes that are beyond reaching and more dramatic in the firm have a higher risk. Likewise, groups and organizations with past and cultures that resist change face higher risk. In developing the BRP strategy, the BRP managing team documents the overall risk and specific risk factors.

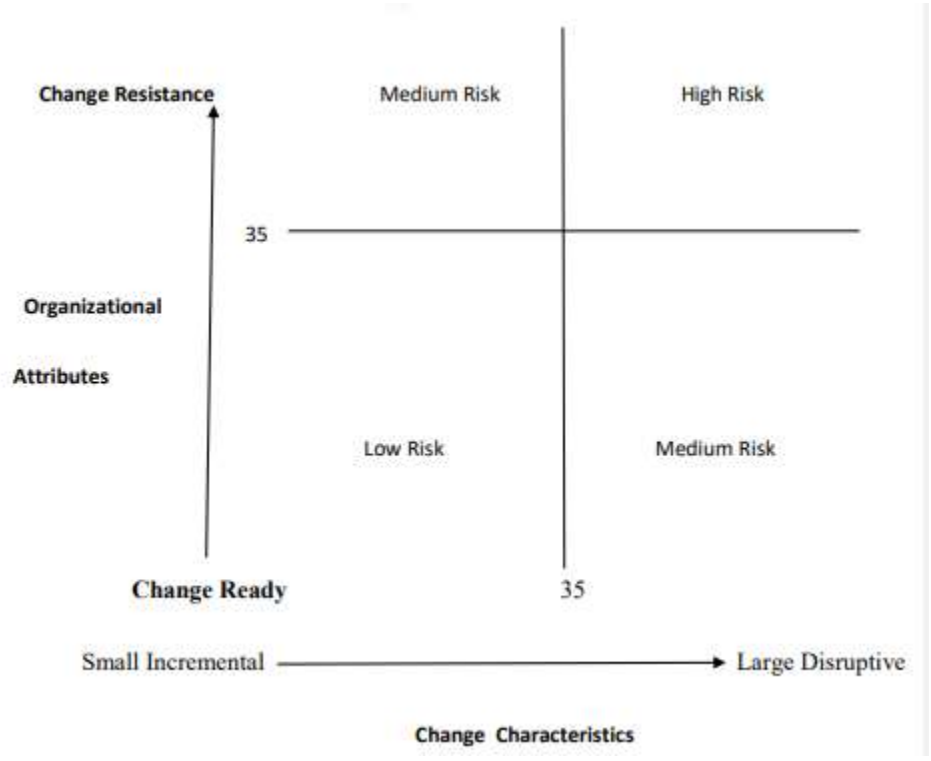

Figure 2.6 ORGANIZATIONAL ATTRIBUTES SOURCE: MADVEDEV (2018)

Prior to the BRP execution, management can decide which change management strategies they will select as described below. The following are the models:

2.12 Strategic Change Model 1: Lewin's Change Management Model

In his book, Sturdy & O'Mahoney, (2018) discuss four different models crucial for transformation management. One of these models is the three-step management process developed by psychologist Kurt Lewin in the 1940s. Its purpose was to help managers understand and facilitate transitions. Initially, managers must "unfreeze" the status quo by persuading team members to let go of old practices and be open to new ideas. The next step involves getting the team to embrace a new belief system that incorporates the changes, with a strong emphasis on the "why." Effective change management involves communication, dispelling rumors, and involving people in the process. The final step is to "refreeze" by integrating the changes into the organizational culture and ensuring long-term sustainability.

Advantages: The Lewin's Change Management Model may be easier to comprehend and offers visual language that outstandingly displays the actions managers should take. This enables managers to think past quantitative analysis, and take into account qualitative means of working through change.

Disadvantages: This model does not cover ways that leaders can deal with people who are averse to change and are unwilling to realign their position. It assumes that everyone will change through enough encouragement and motivation, which is not always the case. Although this model is appealing and rational, it may be implemented in a way it intended, and it does not include solutions to overcome that.

2.12.1 Strategic Change Model 2: The McKinsey 7S Model

The McKinsey 7-S Model is known for its complexity, but this complexity is seen as essential when dealing with intricate changes. The model consists of seven interrelated components, and it is not meant for addressing these components individually; rather, their impact on each other is evaluated to identify weaknesses. Developed by business consultants Robert H. Waterman and Tom Peters (who also introduced the MBWA "Management by Walking Around" in the 1980s), this management model emphasizes the significance of leaders thoroughly assessing each component before initiating any change.

The seven primary factors of the model are: Strategy, structure, systems, shared values, style and skills:

Strategy

The first step in the plan is the identification of problems that must to be addressed and formulating a plan to meet objectives and goals associated with them.

Structure

Leaders then acknowledge the unique challenges and opportunities that brings change, as well as the way that different departments interact with one another.

Systems

Assessing the daily activities and the impact change would have on them.

Shared Values

These are essential values by which the organization operates.

Style

This is the way in which managers approve and execute changes, and the overall cultural feel of the group.

Staff

This is the composition of personnel and the capabilities and roles they are to play within the company.

Skills

These are important skills and competencies of employees operating in the company. This model is meant to take into account all of the above factors when formulating a change management plan.

Advantages: The McKinsey 7S Model is general and entails management to take a thorough look at all parts of an organization that either have a positive or negative impact on change. It offers various ways and perspectives on how companies can understand transitions. There are various factors through which management can assess the differences

such as strategy, structure, systems). Another helpful part of this model is that each component is given equal weight in importance to the transition.

Disadvantages: One of the most important disadvantages of this model is one that is also an asset. The fact that seven different factors are considered makes them interrelated. This means that if one part of the plan fails, other areas can also be affected. As a result, the model brings complications to managers.

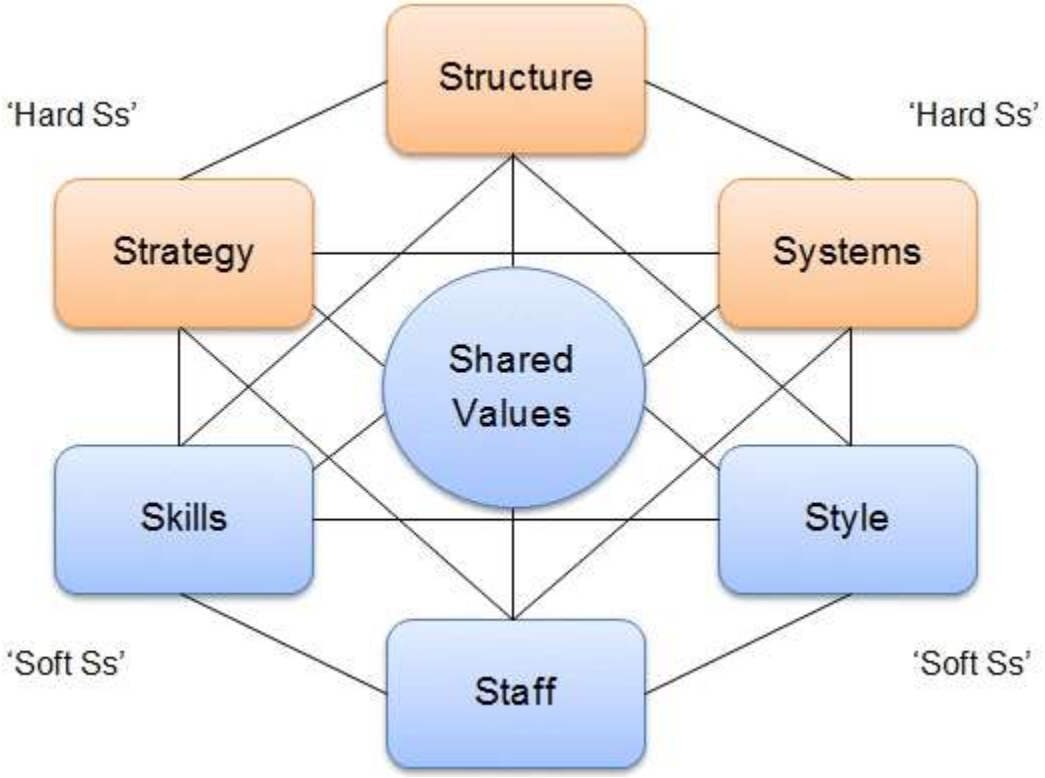

Figure 2.8 Organizational attributes Source: Madvedev (2018)

McDonald and Duff (2018) further explain that the first three - strategy, structure, and systems are considered the "hard" elements, meaning they are easier to recognize and can easily be influenced by management. The hard elements are things like the company's strategies for being more competitive (strategy), AL structure (charts), and systems that govern the processes and routines in a workplace. Conversely, the remaining four "soft" components are said to be more challenging to define and are impacted by the culture of a company. The culture or values of a company are more subject and flexible to constant

change as the skills of staff set the overall leadership style of a company. The key is to maintain a balance among all seven elements by analyzing how they interact with and affect each other.

The McKinsey 7-S model is ideal when management is aware that there is problem but are unsure of how to address the issue. The seven elements act as a guide to maintain the balance of a company once management has determined what alterations need to be made. This model can help in identifying organizational misalignments and provide prompt solutions. It can then assist management in navigating the execution of the essential change, such as ensuring that staff is competent enough for anyone that utilizes a paternity leave option as an example. This will avoid company losses in Production time as an example.

2.12.2. Strategic Change Model 3: Kotter's 8 Step Change Model

According to Kotter (1996), the eight-step change model was developed by professor of leadership at Harvard University after analyzing 100 changes in organizations. Instead of primarily focusing on the change, Kotter addresses the people affected by it. His model incorporates a sequential list of steps leaders can follow to be successful:

Creating a Sense of Urgency: Mangers must explain the importance of change management in the organization to its employees. Managers need to engage discussions with its employees about the problems that the organization is experiencing and how their engagement might assist in moving towards the company direction

Creating an essential Coalition: Managers should then create a coalition of stakeholders from diverse sections of the company to commit to help support the changes.

Generating a Tactical Vision: The act of defining change and developing a complete vision to make it come to fruition; engaging everyone participating in the plan; convincing everyone that alterations are vital and being receptive to feedback from everyone about how to proceed.

Decreasing barriers: Change leaders should then examine procedures and the overall structure of the organization to pre-empt any challenges that could arise

Concentrating on Short-term success: Managers must create milestones for personnel to celebrate in order to keep them motivated during tough times,

Maintaining the momentum: Leaders should create or develop a strategy for continuing to establish new objectives for team members to meet, and keep everyone informed on failures and success and boost stability.

To successfully manage change in an organization, managers should undertake the following steps:

1. Establishing a Sense of Urgency: Managers need to communicate the importance of change to employees and initiate discussions about the organization's current challenges and how their involvement can contribute to the desired direction.

2. Building a Strong Coalition: Managers should form a diverse coalition of stakeholders within the company who are committed to supporting the changes.

3. Developing a Clear Vision: Defining the changes and creating a comprehensive vision to guide the transformation process.

4. Involving everyone in the Plan: Convincing all employees of the necessity of the changes and being open to feedback from everyone on how to proceed.

5. Removing Barriers: Change leaders should analyze existing processes and the organizational structure to anticipate and address potential challenges.

6. Focusing on Short-term Wins: Managers should set milestones for employees to celebrate and maintain motivation during challenging times.

7. Sustaining Momentum: Leaders should devise a strategy to continue setting new objectives for team members, keep everyone informed about both failures and successes, and promote stability in the organization.

Times of change can be challenging and uncomfortable to the team members in an organization. Transitions need to be solidified in documentation and culture of a company, and the coalition that helped to bring it about should be acknowledged.

Advantages: This model is great for leaders that understand that they will undergo challenges in bringing resistant employees on board. It has vital components for developing an effective communication strategy and preparing employees to adapt to the changes.

Disadvantages: The Kotter model is centered on a top-down strategic approach. This is not essentially a problem, but it requires managers who use this method to find ways of incorporating feedback time. While feedback is included in step four, there would be more attention paid to developing a level that heavily refers to addressing forefront personnel and allowing time for feedback.

2.12.3 Strategic Change Model 4: The Kubler Ross Change Curve

Sturdy & O'Mahoney (2018) elaborate on the unique background of the Kubler Ross Change Curve, which was originally formulated by psychiatrist Elisabeth Kubler-Ross to depict the five stages of grief that individuals undergo after the loss of a loved one. Over time, researchers noticed its relevance in the business context, and the five stages have been adapted to aid employees in navigating through organizational changes. The emotions that employees are likely to experience, along with strategies for leaders to guide them through each phase, are as follows:

Denial: Managers should hear the concerns of employees and prioritize face-to-face communication. To avoid being overwhelmed, changes should be well addressed and implemented gradually.

Anger: Pre-planning on how to handle these emotions that employees undergo will enable them to be led to the next phase.

Bargaining: Leaders should be receptive to opinions and feedback, but they should also establish clear standards so employees know what is required of them regardless of whether the input can be used

Depression: Beginning the training programme enables personnel to know that change is inevitable, and this may result in many feeling depressed about changes that have occurred. Reminders and giving positive feedback that make them feel secure will help them move through this emotion towards acceptance. Managers need to continue acknowledging successes and inspiring employees to continue to contribute to the changes and provide feedback.

Advantages: This model is all about resistance from employees and enabling to manage the potential challenges of initial bad feelings from the team. It enables leaders to adequately prepare for how to handle every emotion workers will feel about the change, and they can even connect this process to effects on productivity.

Leaders can feel this framework enable them guide every employee through the emotional roller coaster that could arise because of the change, unfortunately, this is not always the case. Some employees may feel these emotions are not aligned, or others may not follow this arrangement at all. It is a one-size-fit all for walking through the process of coaching employees through what they are feeling.

2.12.4. Strategic Change Model 5: The ADKAR Model

Former change manager and engineer, Jeff Hiatt developed the ADKAR Model. The primary purpose of this model is not to concentrate on a set of phases, but is instead a group of objectives that leaders should try to achieve:

Awareness: Like many other models, this one begins with developing a line of communication with employees to emphasize the need of the change. Justification is essential here.

Desire: Leaders have to appeal to the logical and emotional side of employees and convey how the change directly relates to their current position. The overall objective is to motivate people.

Knowledge: Tell employees what they need to know. Instead of rattling off a list of changes, each employee that is a part of a larger team should be given step-by-step instructions on how they need to implement the transition

Ability: Knowing something and carrying it out are two different things. Leaders need to assess the ability of employees to execute their job and provide extra education if needed.

Reinforcement and identify any fundamental mistakes to keep them from happening again, but for leaders to keep the momentum going, they should install incentives and rewards for exemplary work.

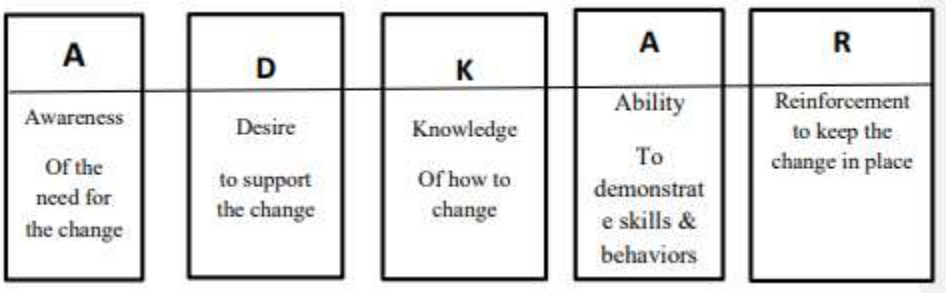

Figure 2.9 ADKAR MODEL SOURCE: (POLIT: 2018).

Advantages: This model focuses on how managers can enable personnel comprehend, interact with, and carry out changes. Since the model is focused on goals, it is easy for managers to possess and adapt it to its company culture and structure. It concentrates on people, and in turn, will make employees feel like employer's care.

Disadvantages: This model is built for gradual changes and is narrowly focus. If managers wanted to make a macro-level transition or were not precisely sure of how deep they needed to go with transitions, this method would probably not get the job done (Sturdy & O'Mahoney, 2018).

Dragan and Toni (2018) documented a study conducted by Elton Mayo and Fritz Roethlisberger at the Hawthorn works of Western Electric Company in Chicago. The Hawthorne Experiment demonstrated that employee productivity is not solely dependent on the physical conditions of their work environment or the amount of compensation they receive. Instead, the satisfaction of employees with their work environment significantly impacts a company's productivity. Mayo's theory suggests that emotional factors have a greater influence on productive effectiveness than rational factors (Hall, Wade, & Rosential, 1993). Additionally, the research showed that social group membership is a powerful human factor influencing employee behavior. Mayo concluded that work arrangements should meet employees' subjective needs for social satisfaction in the workplace. The findings of this study shed light on the current situation at TAZAMA regarding how individual skills affect the implementation of BRP.

According to 2009), Henri Fayol first introduced the concept of re-engineering in the 1900s with the aim of maximizing the utilization of available resources. Despite the advancements in technological resources in the present era, the concept of re-engineering has remained relevant and effective. In their work, Hammer and Champy (1993) emphasize that BRP not only enhances performance but also empowers employees by delegating authority and holding them accountable for their assigned tasks.

In today's competitive business environment, the customer plays a central role, making BRP a crucial aspect of business operations. Martinez (1995) points out that customers in the current market no longer abide by "caveat emptor," but rather, they focus on the "caveat factor." This means they relentlessly demand high-quality products, excellent service, and competitive prices. Businesses that fail to meet these demands risk losing contracts and customer loyalty. The power and freedom that customers now possess have eliminated unearned brand loyalties and fostered intense competition among rivals in the same markets.

As observed in a study carried out by Grover & Jeong(1995) , after implementation of BRP many institutions improved their service performance. Among the public institutions that improved service delivery, the following are the leading ones:

2.13 Empirical review of similar studies

2.13.1 Global Perspective

2.13.1.1 North America – USA

Debela (2009) and Emerie (2012) in their studies concluded that, with regard to human resources and the technological abilities of the organizations, BRP can increase the incremental payback and progressive transformation, instead of major future change. However, Habib and Shah (2018) have a different view to Emerie (2018)'s study, where they claim that there is no common approach to the BRP nor can it definitely be said that BRP will ensure the organizational success even if multiple tools are used, their conclusion is that, success depends on the organisational structure, culture and motivation of staff.
Despite its widespread adoption, BRP has often failed to achieve its intended objectives. Research indicates that US companies, due to their past experience, tend to be more aware of and familiar with various BRP tools and methods compared to companies in other regions (Sockallingam & Doswell, 2017; (Addolvand, Albadvi, & Fedowsi, 2008). US companies also demonstrate higher levels of commitment and consideration when it comes to BRP implementation.

2.13.2 Middle East

In Pakistan, Darmani and Hanafizadeh (2013) studied the oil sector's production process and sought find out where wastage was creeping in costing the companies millions of monies. These scholars concluded that re-engineering success comes from the selection phase of the strategic process. Those companies whose managers acted upon the problem by selecting re-engineering as a strategy to change fortunes performed better than those that decided much later on to employ the change process.. Specific tasks mentioned that play a crucial role in success are deciding on what strategy to use, defining and evaluating risk and return of project implementation, and choosing frames for differentiation, cost leadership and response methods.

In an effort to find the best BRP methods for improving production and service in developing countries, Farughi et al. (2018) sought to find out ways and means of reducing

costs in the apparel industry in China by studying the workers in operation and observing the inefficiencies. The researcher concluded that CSF should be defined at each process level and customized evaluation measures should be developed for each CSF. In essence, success factors of BRP are individualized and should be measured based on an organization's unique characteristics

In the case study "Business Process Re-engineering of Supply Chain Activities in Attock Petroleum Limited (APL)", Idrees (2016) explored the implementation of BRP in a petroleum company. The study focused on APL, a leading oil marketing company in Pakistan, and examined how BRP was used to improve supply chain performance. Data was collected using unstructured interviews from purposively selected engineering personnel from the Subject Company and analyzed using content analysis. The study found that the main challenges faced in implementing BRP include inefficiencies, lack of coordination, and high costs. Furthermore, the study evaluated the outcomes of BRP implementation at APL and revealed significant improvements in supply chain activities such as reduced lead times, improved customer service levels, increased operational efficiency, and cost savings. Overall, this case study provided valuable insights into how BRP can be effectively utilized to transform supply chain performance in a petroleum company. However, the findings of the qualitative case study were context-specific and lack generalisability to other companies in the petroleum industry such as TAZAMA Pipelines Limited.

2.13.3 Asia

In Indonesia, (Badriansyah, Pratama, & Dachyar (2022) studied the effects of BRP on revenue administration within the oil and gas drilling services sector. The mixed method research design was employed where data was collected using questionnaires, interviews and observations. Secondary data was also gathered using the Delphi method and systematic literature review. The study found that BRP has been implemented to a large extent in the sector and has significantly improved revenue administration and ultimately organizational performance. Although the research provided valuable insights on the effects of BRP in the oil and gas sector of Indonesia, the findings were limited as the study

only focused on one aspect of firm performance that is revenue administration within the oil and gas drilling services sector. Henceforth, the findings lack validity and general is ability signifying the need for comprehensive researches like this current study focusing on BRP and firm performance of TAZAMA Pipelines Ltd. Badriansyah, Pratama, & Dachyar(2022) based an entire study on the argument that ERP and BRP add great benefit to any organization, but only if it is coupled with the introduction of new concepts and the establishment of objectives that stem from the strategic innovation that comes with the implementation of ERP and BRP.

The aim of Kayo et al.'s study (2014) in Japan was to find ways to improve the effectiveness of ERP system implementation. This is because BRP is the framework used to execute new Enterprise Resource Planning systems. The study interlinked ERP and BRP success factors relating them more to the success of IT related implementation. Three primary factors attributed to the successful implementation of ERP through BRP are the first Critical Success Factors (CSF) is that an organization must be prepared for the fundamental change that the new process will bring. The second is the competency of the project manager in terms of goal setting, communication, and IT training abilities. The third is cooperation satisfaction, but this is only a success factor when operational satisfaction is achieved. Ultimately, it was found that the key to successful ERP is the use of BRP to implement IT.

Natarajan (2019) conducted research in an Indian College University. The focus of the study was to create awareness of the important role that BRP plays in meeting user demands of library software and other IT systems, the success factors hinged on the human aspect of organizational restructuring. The researchers noted several Critical Success Factors that were all related to human factors. These included having an organizational culture that is comfortable with change, as well as having a management that provides inclusion, empowerment, effective communication and training. They studied the effects of the Re-engineering process in the University.

2.13.4 Africa

The research by Asikhia & Awolusi (2015) explored the factors that contribute to the success of business process re-engineering (BRP) in the Nigerian oil and gas industry. The study utilized a quantitative research design, collecting data through questionnaires distributed to 650 employees in various organizations within the industry. Simple random sampling was employed. The findings revealed several factors influencing successful BRP implementation, including lack of top management support, lack of employee involvement, ineffective communication, and inadequate training. The research provided valuable insights into the critical success factors of BRP implementation in the Nigerian oil and gas industry. The survey's results also showed that effective BRP has favourable impacts on organisational and operational performance for Nigerian oil and gas businesses. In addition, the findings are of great relevance to this study which also aims to establish factors affecting the implementation of BRP at TAZAMA Pipelines Ltd.

Similarly, Awolusi & Atiku (2019) explored the relationship between business process reengineering and the performance of Nigerian oil and gas companies. The authors aimed at identifying the critical success factors (CSFs) that contribute to successful BPR implementation in this specific industry. The study adopted a quantitative research approach, using a structured questionnaire to collect data from 650 employees working in eight selected oil and gas companies in Nigeria. The collected data was then analyzed using structural equation modeling. The findings confirmed that BRP had significant positive effects on business performance of Nigeria’s oil and gas firms. The findings of the study revealed several CSFs that significantly impact the success of BPR initiatives in Nigerian oil and gas companies including top management commitment, employee involvement, effective communication, adequate training, technological infrastructure, organizational culture, and change management strategies.

In the article titled: "Business process re-engineering and profitability in the Nigerian oil and gas industry: the mediating influence of operational performance", (Awolusi & Atiku, 2019) studied the relationship between BPR and profitability in the Nigerian oil and gas industry. The researchers also investigated how operational performance mediates this

relationship. The quantitative research approach was employed where data was collected using questionnaires. Data was analysed using structural equation modelling. The model devised in this study thus validated the favourable impact of Business Process Reengineering (BPR) on profitability, together with the mediating effect of operational performance within the Nigerian Oil and Gas sector. The structural model demonstrated the favourable impact of organisational structure and IT infrastructures on both profitability and operational performance. Nevertheless, the SEM analysis was unable to demonstrate a significant correlation between management competency and support, and the overall profitability in the sector. Furthermore, the study found that operational performance partially mediates the relationship between BPR implementation and profitability. The criticism for this research is that it only focused on quantitative research methods such that the findings lack validity.

The Study by Awolusi & Atiku, (2019) examined the relationship between BRP on organizational sustainability among oil and gas enterprises located in Port Harcourt, Rivers State, Nigeria. The foundational theories that form the basis of this study were the institutional theory and the upper echelon theory. The primary philosophical orientation of this study was positivism, which adopted a realist ontological stance. As a result, a cross-sectional survey design was implemented, utilizing a questionnaire as the primary tool for data collection. The target population for this study comprised of 187 midstream oil and gas firms located in Port Harcourt. The study utilized the purposive sampling technique. The analysis involved the use of data collected from 204 fully completed and valid responses. The Spearman's Rank Order Correlation Coefficient was utilized to evaluate the hypotheses at a significance level of 0.05. The study revealed significant positive effects of BRP on organizational sustainability. However, the findings lack generalizability to the Zambian and Tanzanian contexts. Besides, the study has been valuable to this present study by providing insights on methodology and guiding development of the conceptual framework.

Furthermore, Arise and Adegbie (2021) aimed at investigating the impact of business process reengineering on the financial stability of a specific group of oil and gas businesses listed in Nigeria. The study utilized an ex post facto research approach, focusing on 13

specific oil and gas businesses in Nigeria that were selected using purposive sampling techniques. The secondary data used in this study underwent pre-diagnostic tests to assess their normal distribution, absence of heteroscedasticity, and stationarity at various levels. The descriptive analysis and pooled, random, and fixed panel regression methods were employed to analyze the secondary data. The findings of the study indicated that the implementation of BRP measures has a significant impact on the liquidity, profitability, capital adequacy, asset quality, and tangibility, within the context of listed oil and gas businesses in Nigeria.

In Kenya, Gachau (2013) explored the factors behind the failure of business process reengineering (BPR) using a case study of Kenya Petroleum Refineries Limited (KPRL). The study aimed to identify and analyse the factors that contributed to the unsuccessful implementation of BPR in this particular organization. The case study research design was employed. The results were derived from data that was gathered through the distribution of questionnaires to employees in several departments. The data underwent analysis through the utilization of descriptive statistics, specifically employing the measurements of mean and standard deviation. One of the key findings from this research was poor change management which played a significant role in KPRL's failure to implement BPR successfully. Lack of effective communication, resistance from employees, and inadequate training programs were identified as major obstacles. Additionally, insufficient top management support and a lack of clear vision for BPR were also contributing factors.

In Nigeria, Sidiki and Ayana (2008) and Aregbeyen's (2011) looked at assessing the impact of re-engineering of day-to-day processes on the performance of the Nigerian Banks in Abuja. The researchers agreed that BRP has become a useful weapon for any company that is striving for continuous improvement in performance. However, Aregbeyen (2018) later discovered that BRP projects substantially enhanced the profit performance but not for the expansion of its financial enhanced performance. On the other hand, Emerie (2018) developed and empirically tested a research replica, which assessed whether the BRP implemented by state enterprises contributes to the company's wider performance. The findings indicate that public enterprises in a developing economy can utilize the BRP to improve their company performance. They have also built-up a stock of BRP-relevant

resources and capabilities, have executed the BRP with enough depth, are just beginning post-BRP complementary competencies, which are necessary to maintain and further increase the BRP changes, and have successfully alleviated the negative results of BRP implementation problems.

In Ethiopia, as observed in a study carried out by Berihu, (2009), after implementation of BRP many institutions improved their service performance. Among the public institutions that improved service delivery, the following are the leading ones:

2.13.5.1 The Ethiopian Investment Commission:

It used to take 18 steps and 25 days on average for an individual business person to secure an investment license, whereas now after the conduct of Business Process Re-engineering (BRP) by the Commission it only takes an individual 4 steps and 2 days to get his/her investment license.

2.13.5.2 The Ministry of Trade and Industry (MOTI):

It used to take 14 working steps (processes) and two and a half days to secure a trade license for an individual business person whereas now (after the Ministry implemented BRP), it only takes a business person 6 work steps and 34 minutes to get a trade license.

2.13.5.3 Ministry of Agriculture and Rural Development (MO ARD):

The BRP project reduced the cycle time of preparing facilities for fieldwork from ten days to two hours. The same is true for settling accounts after fieldwork.

2.13.5.4 Addis Ababa Transport Office:

Before BRP implementation renewing driving, license was taking 2hrs but after BRP implementation reduces from 2hrs to 45 minutes. Implementation renewing driving license was taking 2hrs but after BRP implementation reduces from 2hrs to 45 minutes.

A study by Blaug, (2018) looked at what the issues are and the payback of putting in place the BRP in the civil service companies. Secondly, it posed the question of whether it

is moral to make employees the subject matter of re-engineering and lastly, what type of change could the Ethiopians bring about post BRP implementation? Bradford & Burke (2018) The contribution was that human resources and technological ability of the system must be considered and that BRP can bring forward the incremental payback and progressive transformation instead of major change for a predictable future.

Levi (2014) had a different view from Bradford & Burke, (018) because the latter study was aimed at collecting and reviewing the work done thus far in the BRP field. This includes a comprehensive summary of BRP concepts, frameworks, approaches, outcomes, failures and successes causes. After a careful research by Levi (2014), the findings were that there is no common approach to the BRP, nor can it be sure that BRP will ensure the AL success.

Based on the analysis of data that was gathered from the survey of Konkola Copper Mine and Mopani Copper Mines, it was established that users of BRP in Zambia had put BRP strategy to practice in different forms and using different procedures, and that more than half of the population of manufacturing companies within Kitwe practice and are aware of BRP strategy. On the other hand, the study established that there was a relationship between productivity and BRP implementation, and that BRP implementation minimized cost, improved customer relation and the quality of service or product. It on the basis of implementation of BRP at TAZAMA that this study sought to establish whether the information discovered from literature reviewed on the impact of skills of employees has been carried out.

2.14 Significance of Conducting BRP in an Organization

An organization that has managed to execute BRP is easily recognized by the drastic enhanced changes in its business. Supporting this notion Gokoy & Vayvay,(2012) states that BRP will continue to remain the popular tool for the management of change for the many decades to come. This is because the following characteristics are potent tools in BRP:

The focus lies on improvement and innovation, which involves redesigning processes and reducing costs while enhancing the quality of customer service. IT is considered a crucial component in BRP and an essential element in today's business environment, serving as an indispensable tool in process redesign.

BRP plays a significant role in creating a sustainable competitive advantage through radical improvements, which are dependent on diverse and segmented customer demands for consultation, increased competition in meeting customer requirements in various niches, and the pervasive, persistent, and rapid changes in markets. By embracing BRP, organizations are adapting to a new business world that can efficiently operate in dynamic environments with minimal challenges. This challenges traditional assumptions about business models, particularly those built around mass production, growth, and stability, which may struggle to succeed in a world demanding flexibility and rapid response, as termed by Drucker as the 'Age of Discontinuity'.

In today's competitive business environment, customers take center stage, driving the relevance of BRP in shaping business practices. Customers no longer merely adhere to "caveat emptor" but instead demand quality, good service, and competitive prices, being willing to switch brands or contracts if their demands are not met. This customer empowerment has eliminated unearned brand loyalties and removed complacency among competitors in the market.

The utilization of IT plays a critical role in Business Process Re-engineering (BRP) by enhancing process management, enabling automation, and facilitating further advancements. It efficiently automates manual processes, supports multi-location operations, and improves customer service through swift and paperless transactions. According to Straub, Boudreau, and Geffen (2004), having IT experts in a business organization is essential for successful BRP implementation as technology reduces time cycles for fulfilling business obligations. Gokoy and Vayvay (2012) and Hammer and Champy (2009) agree that IT is the primary factor enabling BRP to introduce radical changes more effectively than other methodologies.

Davenport & Harris, (2017) affirm the pivotal role of IT as the catalyst for BRP, facilitating organizational changes and forming a recursive relationship with BRP practitioners. IT infrastructure, according to Mansor & Azudin, (2018) is indispensable for organizational innovation, and improper management of IT infrastructure can lead to BRP failure.

Furthermore, IT offers new advantages to business operations and serves as a tool for cross-functional business process transformation, as highlighted by Davenport and Harris (2017). By implementing IT mechanisms, organizations can decrease complexity and enable broader organizational transformation. However, successful changes in BRP require knowledgeable individuals who understand the objectives and know how to utilize IT resources effectively.

Cunnington, Menter, & Chris (2017) Also concur that IT is a crucial element in implementing business strategy and driving business performance. The competence of IT is seen as the backbone for enhancing business processes, including BRP, particularly in response to rapid changes in specific financial markets.

2.15 Challenges an organization faces in the implementation of Business Re-engineering process

Chibuye (2019) documented the Business Process Re-engineering (BRP) undertaken at the Food Reserve Agency, where they implemented a Remote Sensor Network and Automation of Business Processes. The agency's primary responsibilities include ensuring food security, promoting efficient agricultural production and marketing, and providing a readily available market for small-scale farmers, all of which are crucial for the agency's success. The study identified challenges in managing warehousing systems, current operations, and other activities, which could be addressed through information and communications technologies. The key issues faced by the Food Reserve Agency were grain spoilage due to poor environmental supervision and theft of grain due to inadequate controls.

Notably, this was the first implementation of a remote sensor network in Food Reserve Agencies across Africa, making it challenging to establish credible benchmarks for

measuring success. Despite the difficulty in measurement, the study hailed the process as a pioneering effort in Africa and suggested replication in other regions to achieve food security by minimizing wastage. Consequently, BRP has become a vital tool for companies seeking continuous performance improvement, and its implementation lacks a standardized methodology.

According to a study by Guimaraes & Paranjape, (2013), the use of BRP to improve operations did not achieve the expected results, which was primarily attributed to incorrect execution rather than flaws in the process itself. Failures in maintaining strong lines of communication throughout the process and inadequate expertise about the company's structure were identified as contributing factors.

Attaran & Attaran, (2018) Point out various challenges in executing BRP, such as misinterpretation of the concept, unrealistic objectives, resistance from management to change, misapplication of the term "BRP," lack of a proper strategy, and failure to recognize the importance of people in the process. On the other hand, Ahmad, Francis, & Zairi (2007) emphasize that BRP should focus on reengineering processes as a whole rather than singling out specific processes. They stress the importance of establishing a balance between individual, job-related, and organizational goals to ensure successful BRP execution.

In his study, Kotter (1996) examines the reasons for failed change initiatives and identifies key success elements that organizations should consider during execution. These include avoiding complacency, creating a powerful guiding coalition, understanding the importance of vision, effective communication of the vision, overcoming obstacles, celebrating short-term wins, avoiding premature declarations of victory, and anchoring changes firmly in the corporate culture.

Effective accomplishment of strategic objectives in re-engineering involves more than just improving production or product quality. Addressing shortcomings and designing processes comprehensively play a vital role in the success of strategic re-engineering. This requires undertaking strategic initiatives early in the re-engineering process, which helps

in understanding competitors, markets, and the industry's position. Identifying critical success factors related to competition becomes a priority, and individual business processes are then targeted for successful re-engineering projects. It is essential to rank projects top-down, considering the entire organizational structure and the overall procedure. Supporting BRP with analytical and process tracking tools is recommended (Hall, Wade, & Rosential, 1993).

Stalk's (2010) study conducted in Kenya highlighted the changing dynamics in banking and financial institutions, which compelled players at all levels to engage in re-engineering. The study focused on KCB Bank's use of business process re-engineering as a strategic tool. The bank's strategies and operations needed re-engineering to adapt to changes in the internal and external business environment and the financial sector as a whole. Responding to major trends shaping markets became crucial for survival and growth in the global economy. Business process re-engineering in banks contributes to management, diversification of growth, productivity, and profitability. Potential enemies to the smooth implementation of BRP were also identified.

2.15.1. Resistance to Change

According to Al-Mashari, Irani, & Zairi (2001) naturally, BRP fosters change and human being resists change. This resistance is the most common barrier of BRP and renders success difficult. El-Taliawi(2018) argues that employees resist changes because of uncertain future initiated by BRP changes including job loss, authority loss, getting anxious, skepticism about project results and feeling uncomfortable working in new environment after BRP has taken place. Inadequate communication among employees and their leaders which can result in lack of motivation and reward may result into resistance to change. Sturdy & O'Mahoney (2018) argues that job loss and security combined with a sense of loss of control and position, particularly within middle management can result in resistance to change. However, line managers may not be receptive to change, due to a lack of determination for radical change, and also through a lack of cross-functional cooperation.

2.15.2. Problems Related to BRP Resources

According to Sturdy & O'Mahoney,(2018) before any BRP project is embarked on, it is very necessary to ensure that all the necessary resources required will be available to the programmer. Failure of BRP occurs due to lack of planning of the total financial impact of the process and also difficulty in forecasting future resources that are required after adopting BRP. Grover & Malhotra (1997) argue that there must be preparedness for anything new that an organization adopts. The employees and other resources need to be ready before the introduction of the process which must be introduced in such a way that ensures its successful use. There must be planning which includes considering the organization's current culture, top management commitment and the adequate resources for carrying out the process and for implementation of the same.

2.15.3. Ineffective BRP Teams

An embracing BRP has to have the flexibility to create the types of teams required for the successful implementation of the BRP project. Bradley (1994) argues that the inability to create cross-functional project teams and difficulty in finding suitable team members can give rise to serious problems. Lack of hierarchical structures will leave people thinking solely in terms of their own immediate working group. Conflicts can also occur between BRP teams and the persons within them who have functional responsibilities, and this can lead to unclear definition of job roles. Lack of communication among members, lack of training for BRP teams and inadequate team skills will also lead to an ineffective BRP team. What was prevailing at TAZAMA as challenges to the successful implementation of BRP was not known until this study was done.

2.16 What are the options to handle the challenges identified in implementation BRP?

2.16.1 Tools to Mitigate Negative Impact of BRP

There are various tools that can be used to mitigate the negative effects of BRP. According to Ahmad, Francis, & Zairi, (2007) when a BRP project is undertaken across the organization , it requires managing a massive amount of information about the processes,

data and systems. If you do not have an excellent tool to support BRP, the management of this information can become an impossible task. To be successful, BRP projects need to be top down, taking in the complete, and full end to end processes. It needs to be supported by tools that make processes easy to track and analyze.

Abdolvand, Albadvi, & Fedowsi, (2008) argues that BRP seeks to make radical changes in the way a business operates, it is necessary to make concomitant changes in the business as an organic entity. The areas in the organization that need to be changed include: culture, structure, performance measurements, incentive systems and management styles. In order to do this, management needs to use a number of tools and techniques that have been emerging since the early 1980s under the umbrella of change management.

According O'Neil, Sohal, & Teng, (2016) the various definitions of BRP do not refer specifically to the tools and techniques used in re-engineering business processes. This has resulted in many authors and consultants alike pursuing many different tools in the search for the best re-engineering application. These tools and techniques include:

2.16.2. Bench Marking

(Jain & Chandrasekaran, 2010) indicate that benchmarking is the initial step undertaken by firms that are involved in BRP efforts. It is a process that determines industry best practices and can be utilized as a guide for improving organizations practices. Primarily, benchmarking techniques identify efficient and productive business processes that can be used as a target for improvement of inefficient processes which leads to firms indulging in re-engineering efforts to reconfigure their processes to improve productivity. For this reason, benchmarking has gained increasing acceptance as a technique that enhances BRP efforts within organizations.

Garengo, (2019) observes that benchmarking in service industries provides several key insights for improving performance. This is possible if a firm applies the three categories of benchmarking. These categories according to Jain & Chandrasekaran, (2010) include; internal, industry/ competitive benchmarking and process/generic benchmarking. Internal benchmarking involves benchmarking against internal operations or standards, usually in

a multidivisional or multinational enterprise. Industry/ competitive benchmarking deals with benchmarking against other firms in the same industry, whether, they are direct competitors or not. In the case of TAZAMA it would benchmark itself with other similar firms like Zambia Railways (TAZARA), and process benchmarking involves generic processes that are used to position leaders in any industry as benchmarks. Blanchard & Olivier, (2019) argue that applying benchmarking during the implementation of BRP projects, will be in a better position both to monitor and to analyze the degree of success of the improvement projects.

On the other hand, with sufficient benchmarking, teams can also learn and improve on the entire business function according to its customer's perspective. Talluris 2000) suggested that benchmarking should begin by gathering data about the company, which is later used to benchmark the initial operating processes " performances and the expected operating processes" performances after the implementation of various improvement projects. The next major element of benchmarking is to gather information about the way business is conducted and this information will provide a framework for change.

2.16.3. The Matrix for Change

According to Brynjolfsson, Renshaw, & Alstyne (1997) the Matrix of Change can help managers identify critical interactions among processes. In particular, this tool helps managers deal with issues such as how quickly change should proceed, the order in which changes should take place, whether to start at a new site, and whether the proposed systems are stable and coherent. When applied at a company like TAZAMA, the Matrix of Change can provide unique and useful guidelines for change management. The Matrix of Change presents a way to capture connections between practices. According to Davenport & Harris (2017) it graphically displays both reinforcing and interfering AL processes. Armed with this knowledge, a change agent can use intuitive principles to seek points of leverage and design a smoother transition.

The Matrix of Change presents a way to capture connections between practices. It graphically displays both reinforcing and interfering AL processes. Armed with this knowledge, a change agent can use intuitive principles to seek points of leverage and design

a smoother transition. Once the broad outlines of the new system and the transition path have been charted, authority can once again be decentralized for local implementation and optimization (Davenport & Harris, 2017). The Matrix of Change functions as a four-step process. It provides a systematic means to judge those business practices that matter most. It highlights interactions among these practices and possible transition difficulties from one set of practices to another. It encourages various stakeholders to provide feedback on proposed changes. And, it uses process interactions to provide guidelines on the pace; sequence, feasibility, and location of change.

2.16.4. A Strategic Relationships Analysis Tool

According to Earl, Sampler, & Short (1995), business processes are modeled as a network of dependency relationships among employees in an organization. Employees need each other in order for goals to be achieved, tasks to be performed, and resources to be furnished. Gokoy & Vayvay, (2012) note that jobs that employees play and positions they hold may be intertwined with dependencies. These dependencies have strategic ramifications because, on the one hand, they present possibilities by allowing employees to do tasks that would not have been possible or would not have been completed as well, but, on the other hand, they can present weaknesses since the dependent individuals may not perform as expected.

This tool allows the network of strategic dependencies among employees and positions and roles to be constructed, refined and analyzed, including the analysis of opportunities and vulnerabilities, and analysis of patterns of dependencies based on the concepts of enforcement, assurance, and insurance (Hengst & V reede, 2004). A graphic user interface for presenting and interacting with the model is also included in the tool. This tool could be used, for instance, to develop and analyze the claim-processing model or any of its variations, identifying objectives that are not being met, activities that are not being completed, or resources that are not being provided. The tool can also note long chains of dependencies that suggest vulnerabilities, or dependency patterns which define conflict-of-interest situations.

2.16.5. Strategic Relationship Redesign Tool

Metz & Attong, (2012) is of the view that the fundamental tenet of this tool, according to this statement, is that one can learn the "why" behind process elements or steps by pursuing their connections to the process design objectives, extending the rationale model as necessary. Alternatively, given some design goals, one can explore alternative ways for achieving them. This could be assisted by generic means-ends knowledge (for example: methods for reducing errors, for preventing fraud) that are stored in a knowledge base, using knowledge structuring mechanisms such as classification and generalization. Moreover, correlation rules can be used to assist in the detection of cross-impacts among goals and in identifying design trade-offs.

Guha, Kettinger, & Teng, (1993) explain how assembling a representative body of means-ends knowledge in business process redesign to demonstrate the practical utility of this tool is one of the problems in creating such a tool. The collection of techniques for accomplishing security, accuracy, and performance soft goals in the framework of non-functional requirements for information system design has been a first step towards this goal.

2.16.6. A Process Model Validation Tool

This tool provides functions that could be used to evaluate the performance in validating a process model, or assuring that it is consistent with how the process is understood (Mlay, Zlotrikova, & Watundu, 2013). Validation is accomplished by allowing the user to simulate the execution of a process. As long as the description of the conditions in effect is provided at the start of a business process, the tool responds to inquiries about the state of the world as the process progresses. The tool offers a declarative language for process specification and can simulate processes even when a process or its initial state is only partially specified. The simulation tool is designed to provide information on the organization's state both before and after business process re-engineering has been completed, given a process specification and a sketch of an AL state (Bradford & Burke, 2018).

2.16.7. A Process Verification Tool

Atton, (2018) hold the view that, this tool is meant to make it easier to confirm if a given process satisfies defined properties within a given state restriction. The tool will offer enhanced specifications to ensure that the limitations are resolved given a set of process specifications and a set of requirements that must be upheld by business process re-engineering. Ahmad, Francis, & Zairi (2007), using the process verification tool, makes it feasible to spot potential issues when business process re-engineering is implemented in the organization, and if there are any, the model can change before it is used for execution. In order for work to be executed, systems such as workflow systems rely on process verification tool.

2.16.8 Training and Education

Training and Education is another way of achieving successful BRP implementation. According to (Al-Mashari, Irani, & Zairi (2001) many researchers consider training and education to be an important component technique for successful BRP implementation. Although BRP is a straightforward idea, managers must be trained in the techniques and concepts that underlie it in order to utilize it confidently and effectively. Much of this can be done in-house on-the-job by managers who have gained these skills previously, and are using them with their teams or can consider specific training that undertakes re-engineering projects may have to increase their training budgets. Training for BRP should include interpersonal and information technology abilities as well as BRP-related concepts, skills, and strategies. Training on the tools used and other processes carried out in the implementation of BRP projects must be provided to both employees and their managers. This training benefits business managers, line managers, Information system managers, and other staff in the front-line.

2.17 Critical Success factors for successful BRP implementation

According to Martonova, Surinova, & Paulova,(2013) an organization can successfully implement BRP if the following attributes are considered by management: a comprehensive approach and an effort to achieve concurrent changes and improvements

on many important factors, including cost, quality, lead times, customer and vendor relations, technology utilization, organizational arrangements, and employee learning and competence development.

The main success factors are explained in the next section.

Critical success factors (CSFs) for BRP implementation have been extensively discussed in the literature, with evidence of their impact on performance. However, many large companies seeking competitive advantage still lack a full understanding of the success factors that drive successful BRP implementation (Ahmad, Francis, & Zairi, 2007). Re engineering is undoubtedly essential for firms aiming to succeed in the modern, globalized economy. The BRP elements are closely linked to a firm's mission and strategic objectives. While the mission and goals focus on the aims and desired outcomes, BRP factors concentrate on the most crucial elements and the best ways to achieve those goals.

BRP factors play a crucial role in aligning and planning with an organization's strategic direction. Identifying the most important factors is essential for organizational success, and various BRP factors have been developed and validated through studies across different industries such as manufacturing, education, and services. These factors represent key areas of activity that require constant and careful attention from management. It is vital to recognize that BRP factors may differ depending on the industry and the organization's position within that industry. Understanding the factors related to BRP implementation and organizational performance improvement is of utmost importance.

The existing literature on BRP studies can be categorized into two main viewpoints. On the one hand, the first group of scholars believes that BRP is a remedy for addressing turbulent market changes, customer demands, and competition (Hammer & Champy, 2009). On the other hand, the second group of scholars holds the view that BRP has not lived up to its expectations. According to Al-Mashari, Irani, & Zairi(2001), the average success rate of implementing BRP in developed countries, especially Multi-National Corporations, was found to be around 55 percent, with 61 percent success in the USA and 49 percent in Europe. Most studies on BRP have centered on the manufacturing industry, with relatively fewer studies conducted in the oil industry. Thus, generalizing the success

rate of BRP can be risky due to potential cross-national differences, such as cultural beliefs, norms, and values. The reengineering process challenges the entire set of values and beliefs within an organization, making it a challenging undertaking (Hammer & Champy, 1993). The lack of empirical studies with rigorous methodologies covering various aspects of BRP implementation has been acknowledged by several authors (Ahmad, Francis, & Zairi, 2007) (Bradford & Burke, 2018).

In previous research on BRP factors, Addolvand, Albadvi, & Fedowsi, (2008) identified six organizational BRP factors for implementation. These factors include process change, accomplishment of goals and objectives, implementation problems, derived benefits, and organizational performance. The study also pointed out success factors for implementation, such as external factors, employee empowerment, operational factors, communication, method and tools, and leadership.

Additionally, Addolvand, Albadvi, & Fedowsi, (2008) reported six predictors for BRP: strategy, management commitment, IT, customer focus, continuous improvement, and performance outcomes. In another study by Evdokimova & Llyin (2016), ten dimensions were presented to measure BRP across five themes: strategic approach, performance measurement, creating business process architecture, human and organizational factors, and the role of IT.

Attaran & Attaran (2018) proposed seven success factors based on a comprehensive review of existing literature and previous surveys. These factors are as follows: top management commitment, education and training, teamwork, effective project management of BRP, employee cooperation, IT support, and measurable results. Meanwhile, Anand, Chandrashekar, & Narayanamurthy, (2014) identified seven crucial success factors for BRP implementation in higher educational institutions. These factors include teamwork, fostering a quality culture, implementing a quality management system, rewarding initiatives, managing change effectively, adopting a less bureaucratic and participatory management style, and ensuring adequate financial resources.

The lessons learned from BRP approaches were examined through case studies in various studies. In one such study, Anand, Chandrashekar, & Narayanamurthy, (2014) classified

the critical success factors (CSFs) of BRP implementation into five dimensions, each with its set of measurable items. The five latent constructs are as follows: changing management, management competence, organizational structure, BRP project management, and IT infrastructure.

Hence, in the current study, BRP factors have been tailored to fit the specific scope of the oil industry, aligning with previous research (Al-Mashari, Irani, & Zairi, 2001). These factors are considered as independent variables and consist of the following eight elements: 1) Change Management 2) Top Management Commitment 3) Less bureaucratic and flatter organizational structure 4) Project Management 5) Customer Focus, 6) Effective process redesign, 7) Adequate financial resources, and 8) IT infrastructure. These eight BRP factors play a vital role in ensuring the success of the transformation process. Each factor will be discussed in detail below and also presented in the conceptual framework.

2.17.1 Change management

Space

The reluctance of individuals whom project implementers believe will benefit is one of the most underappreciated barriers to successful project implementation. Most projects underestimate the cultural impact of the major process and structural change, and, as a result, do not achieve the full potential of their change effort. Change is not an event, despite the many attempts to call people together and have a meeting to make a change happen. Change management is the discipline of managing change as a process, with due consideration that we are people, not programmable machines. It is about leadership with open, honest and frequent communication. It must be okay to show resistance, to voice issues, and to be afraid of change.

Organizations do not change but people change, one at a time. The better one manages the change, the less pain one will have during the transition, and the impact on work productivity will be minimized. Re engineering is not downsizing, restructuring or automation but it eliminates works, not jobs or people. It is concerned with how work is done not how organizations are re-structured.

Reengineering enables process design, rather than providing a new mechanism for performing old ones, and it is revolutionary.

Change Management can be referred to as a process for restructuring and redesigning the organizational activities in order to keep abreast of challenges and meeting the needs of customers (Anand, Chandrashekar, & Narayanamurthy, 2014). Changes in organizations are being managed by the leader or manager for the organization by incorporating employees into the process so as to achieve a positive goal. Radical changes in organizations are being achieved through effective communication, involvement of employees, reward and motivation, socio-cultural adjustment need to overcome resistance and facilitate the acceptance of the desired procedures or policy (Bradford & Burke, 2018). The factors that relate to change management in organizations include:

2.17.1.1 Reward and motivation

Organizations motivate employees through various means. The method of motivation can be in a form of addressing the hygienic or motivating factors. The hygienic factors include inducement by increasing salary, and bonuses. The motivating factors encompass job enlargement, job enrichment, job rotation, promotion, offering higher responsibility, and acknowledgement of higher performance achievement of employees. The organization reward system should be revised as part of the motivation process for the BRP effort. An effective motivation package for an organization has to be wide spread and give equal chances and opportunities for all employees. Job enlargement through the introduction of new job titles can be considered as an example of motivation and encouragement of people to endorse the reengineering program without fear.

2.17.1.2 Effective communication

Communication is another important change management tool perceived as very critical in facilitating BRP (Hammer & Stanton, 1994). However, it is also considered by some organizations to be the most difficult part of BRP. Davenport & Harris (2017) Emphasizes the need for communication throughout the change process for all levels and for all individuals, and stresses that, it should occur regularly between top management and the

subordinates. The communication should discuss issues related to sensitive issues such as employee's right sizing, downsizing openly and honestly, business strategies, vision, mission, customers and competitors. Effective communication in organization keeps employees up-to-date with related changes in policies and procedures. Communication in organizations prevents rumor mongering and filters noise. Communication should be open, honest and clear, especially when discussing sensitive issues relating to change, such as personnel reductions (Ahmad, Francis, & Zairi, 2007).

Sturdy & O'Mahoney, (2018) argues that communication is an important aspect of BRP, and the ease with which management can communicate through all levels of the implementation during a BRP effort, will have a significant bearing on the success of a BRP project. Communication involves translating the ideas and vision of management, which must then be translated into the attitudes and behaviors of those impacted by the program. I t is necessary to ensure, that the communication effort starts well in advance of the commencement of the BRP program. According to Davenport & Harris (2017) inadequate vertical and horizontal communication between BRP teams and other personnel relating to the need for change and the hiding of uncertainties in communication can result in a lack of motivation and reward.

2.17.1.3 Creating effective organizational culture

An effective organizational culture exhibits the professionalism of its employees to work as a team for achievement of the desired objectives. BRP encourages integration; teamwork; cooperation; coordination; empowerment of employees in the re-engineered work environment; create effective organization's culture norms and value acceptable to the employees. However, trust and honesty among team members are also needed, as well as within the organization as a whole. Organizational culture is an important factor in successful BRP implementation. Cooperation, coordination, and empowerment of employees are the standard characteristics of an innovative organizational environment. A classless culture supports these attitudes. An egalitarian culture should be developed within the organization to enable the successful implementation of any organizational change. It

also avoids stress and resistance to change among employees, which is acknowledged as being a fundamental barrier to change (Addolvand, Albadvi, & Fedowsi, 2008).

2.17.1.4 Stimulating receptivity to change

Stimulating Receptivity to Change measures the extent of the organizations influences on its employees to accept the new changes introduced for overall organizational improvement. The organizational influence requires top management interaction with subordinate and various teams within the organization to achieve positive results (Indulska, Recker, Roseman, & Green, 2009).

2.17.1.5 Employee's empowerment

Employee's empowerment is an effective factor leading to the success of BRP implantation. Empowerment gives a chance to its employees to contribute positively to the organization by making decisions without reference to their supervisor, at the same time, deciding on how work should be tackled or the right technology/tools to be used in achieving the organizational objectives. As BRP results in a top-down approach, decisions are being pushed down to lower levels, and empowerment of both individuals and teams become a critical factor for successful BRP efforts (Attaran & Attaran, 2018). It establishes a culture in which staff from all levels feels more responsibly accountable and promotes a self-management and collaborative teamwork culture.

2.17.1.6 Human involvement

Human involvement in an organizational project decision process facilitates achievement of its objectives. Human involvement is a powerful instrument for organizational culture that encourages employee's motivation and loyalty to the organization. The culture of experimentation is an essential part of a successfully re-engineered organization. Therefore, people involved or affected by BRP must be prepared to endure errors while reengineering is taking place.

2.17.1.7 Revising Reward and Motivation Systems

Al-Mashari, Irani, & Zairi, (2001) argue that staff motivation through a reward program has a crucial role in facilitating re-engineering efforts and smoothing and making the BRP success. BRP brings about different jobs, and thus existing reward systems are no longer appropriate for the new work environment. Therefore, reward systems should be revised as part of the BRP effort and the new reward and incentive system must be widespread, fair and encourage harmony among employees. Introducing new job titles can be considered as one example of encouraging people to endorse the re-engineering program without fear (Hammer & Champy, 1993).

2.17.2 Top management commitment, Competency and Support

(Mansar & Reijers (2007) observes that sound management processes ensure that BRP efforts will be implemented in the most successful manner. The most noticeable managerial practices that directly influence the success of BRP implementation are top management support and commitment, championship and sponsorship, and effective management of risks.

It is the most evident managerial practice that directly affects the success of the organization (Hammer & Champy, 2009). Top management commitment ensures that employees contribute towards the successful achievement in remarkable organizational performance as a result of the implementation of projects in the organization. A lack of commitment in organizations may result in a lack of resources and funding that terminates redesigning of the processes.

Top management: the real involvement of top management in the organizational performance. It should be effective, real, active and clear to involve all employees. Top management leaders should have a clear knowledge about the company's situation. In addition, they should have enough knowledge of the project and a realistic expectation of the results. Top management is responsible for each activity on all levels within the organization (Siha & Saad, 2008). They should provide a clear direction or vision in order to help BRP team members to be directed towards the desired results.

Major business process change typically affects processes, technology, job roles and culture in the workplace. Significant changes to even one of these areas require resources, money, and leadership. Changing them simultaneously is an extraordinary task. If top management does not provide strong and consistent support, most likely, one of these three elements (money, resources, or leadership) will not be present over the life of the project and severely cripple the chances for success. It may be true that consultants and reengineering managers give this topic a lot of attention, as most current models of re-designing business processes use staff functions and consultants as change agents, and often the targeted organizations are not inviting the change. Without top management sponsorship, implementation efforts can be strongly resisted and ineffective.

Top management support for large companies with corporate staff organizations has another dimension. If the top management within the line organization and staff organization do not partner and become equal stakeholders in the change, and only have staff management support, the organization is most likely ill-prepared for a successful reengineering project (line management in this context includes the top managers of the operation who are ultimately accountable for business performance P&L, and customer service, etc.). Projects that result in a major change in an organization rarely succeed without management support for the line organization.

Top management commitment is the highest level of management where the top officials determine the strategic direction of the organization. In order to have successful BRP, top management should communicate with employees in order to motivate the movement, and control the BRP users.

Addolvand, Albadvi, & Fedowsi (2008) argue that, top leadership should always have a clear knowledge about the current situation. This is because they play a crucial role in AL process improvement as they are the primary decision makers and the essential ingredients of any human activity system. This is necessary for BRP to have a “sufficient knowledge about the BRP projects” and “realistic expectation of BRP results.” As a result, top management should be able to provide employees with channels of communication and improve their ability of understanding each other and also the BRP projects that a company

undertakes. This empowers employees and they are able and willing to cooperate in a new system.

2.17.3 Less bureaucratic (flatter) structure

To enable BRP in relation to encouraging creativity and in formativeness in the organization, as well as the need for less bureaucracy, more participation and empowerment in the organization, there is need for the structure to be flatter.

Generally, BRP entails a flatter, cross-functional and less bureaucratic structure. However, being that it is essential for BRP to take place successfully, Addolvand, Albadvi, & Fedowsi (2008) are of the view that organizations could implement less bureaucracy to encourage innovativeness. Consequently, in order to avoid failure of BRP implementation, organizational structure should be flexible, as discussed by Ahmad, Francis, & Zairi, (2007). Additionally, several authors that worked on BRP research, such as Davenport & Harris,(2017), emphasized the necessity of process integration in organization structure in order to achieve desirable business outcomes. (Burke W. W., 2017) proposed ways in which successful results in BRP implementation can be achieved by significantly changing the organization's structure, with emphasis on cross-functional work teams. This suggests that the top management should re-evaluate their organizational structure to determine whether it is appropriate for the situation, considering the rate at which the environment changes and tight competition in the market.

Both the Tanzanian and Zambian Office units and departments should be empowered to operate within their budget allocation. This kind of organizational structure gets rid of the delays encountered when decisions are made and enabling the company to be more responsive to its customers.

Grint & Willcocks(2015) held the position that empowerment of would make organizations respond faster to customer needs, and, hence, improve the organizational performance.

2.17.4 BRP Project Management

Effective project management is considered as the critical factor of change management. A pilot project indicates failures and risks that provide the opportunity to make appropriate changes to the efforts, thus promoting success and preventing possible disasters. BRP project management refers to the extent of the alignment of project strategy with the corporate strategy, effective use of consultants, effective planning and project management techniques and adequate identification of values and performance measures of the project (Anand, Chandrashekar, & Narayanamurthy, 2014).

Successful project implementation is highly dependent on effective project management. New processes would be created to define jobs and responsibilities across the existing organizational functions (Davenport & Harris, 2017). There is a clear need to create a new organizational structure that determines how project teams are going to work, how human resource is integrated, and how the new jobs and responsibilities are going to be formalized. Project management is important in order to plan and manage the BRP to be correctly implemented. Al-Mashari, Irani, & Zairi(2001) states that employees should be adequately trained to get the required skills in doing the tasks assigned to them.

The reengineering strategy should be closely aligned with, and tied to the corporate strategy and core competencies that are critical to the organization's success.

2.17.5 Customer focus

Customer research, competitive analysis, customer needs analysis, and companies that can meet customer demand are the foundations of customer focuses on the external orientation. These strategies help companies get a competitive edge over their rivals. (Attaran & Attaran, 2018). Customer requirements and expectations should be defined and measured, and processes should be defined broadly in terms of customer values. Benchmarking allows learning from the experience of other organizations as well as from one reengineering process to another in the same organization. An innovative method of conducting business in an information era is electronic banking (or "e-Banking"). For an innovative organization, BRP must involve customers (Ahmad, Francis, & Zairi, 2007) .

Organizations should gather information from their customers to drive the BRP projects. This helps them to recognize their customers' needs (Ahmad, Francis, & Zairi, 2007).

2.17.6 Management Competency and Support

Mansar & Reijers (2007) are of the view that sound management processes make certain that BRP efforts will be implemented in the most successful manner. Top management support, commitment, championship, sponsorship and effective management of risks are the most noticeable practices of management that influence the success of BRP.

Addolvand, Albadvi, & Fedowsi,(2008) argue that, top leadership should always have a clear knowledge about the current situation. This is because they play a crucial role in AL process improvement as they are the primary decision makers and the essential ingredients of any human activity system. This is necessary for BRP to have "sufficient knowledge about the BRP projects" and "realistic expectation of BRP results." Therefore, top management should be able to open up channels of communication for members of staff and enhance their capacity to understand one another as well as the BRP projects that a company conducts. Employees are empowered by this and are able and willing to work together in a new system.

2.17.7 Organizational Structure

Talluri (2000) argues that there is a clear need to create a new AL structure which determines how BRP teams are going to look, how human resources are integrated, and how the new jobs and responsibilities are going to be formulated. Sturdy & O'Mahoney, 2018 Notes that BRP creates new processes that define jobs and responsibilities across the existing AL functions. Success of a BRP project depends on proper job integration of the human resource infrastructure. This will make it possible to complete a number of jobs quickly, improving product quality, processing speed, and cost. Therefore, it is essential that the new AL structures can be produced without affecting or destabilizing the current manufacturing processes.

2.17.8 Project Planning and Management

The key to completing a successful BRP project on schedule is careful preparation and giving yourself enough time. The project management process includes creating a process vision, including BRP with other improvement initiatives, using appropriate planning and project management techniques, performance identification, allocating the right resources, and making good use of consultants. These techniques identify a methodology for external orientation and learning, making effective use of consultants in building a process vision, which integrates BRP with other improvement techniques, and ensures adequate identification of the BRP value (Hammer, 1992).

2.17.9. Revising Reward and Motivation Systems

Al-Mashari, Irani, & Zairi(2001) hold the position that a reward program's ability to motivate employees is essential to re-engineering efforts, smoothing out the BRP, and success. Existing reward methods are no longer suitable for the changing work environment since BRP leads to alternative professions. Therefore, reward systems should be revised as part of the BRP effort and the new reward and incentive system must be widespread, fair and encourage harmony among employees. Introducing new job titles can be considered as one example of encouraging people to endorse the re-engineering program without fear (Hammer & Champy, 1993).

2.17.10. Information Technology Infrastructure

Information Technology (IT) infrastructure is considered as a vital component to the success of BRP in any organization. According to Sturdy & O'Mahoney(2018), the competency and effective use of software tools have been proposed as the most important factors that contribute to the success of BRP. These include building an effective IT infrastructure with adequate investment, measures of its effectiveness, proper integration and effective re-engineering of legacy of IT. entraman (1994) is of the view that top management should be part of strategy formulation as well as providing a commitment for the whole process of redesign, on the other hand the IT manager is tasked with the responsibility of designing and implementing the IT strategy.

2.17.11. Communication

Sturdy & O'Mahoney (2018) are of the view that an important aspect of BRP is communication and the ease with which management can communicate through all levels of the implementation during a BRP effort, will have a significant bearing on the success of a BRP project. Communication involves translating the ideas and vision of management, which must then be translated into the attitudes and behaviors of those impacted by the program. It is necessary to ensure, that the communication effort starts well in advance of the commencement of the BRP program. According to Davenport & Harris(2017) inadequate vertical and horizontal communication between BRP teams and other personnel relating to the need for change and the hiding of uncertainties in communication can result in a lack of motivation and reward.

2.17.12 Readiness for Change

Progress in many organizations is attributed to the use of BRP because of its ability to provide solutions to many business problems that may be encountered. However, the high failure rate of BRP demands that it takes thorough consideration of all aspects in the project (Kumar & Tyagi, 2014). As a result, readiness for BRP is prioritized, and if not, the procedure should be postponed until it is. When there is readiness, BRP projects are guaranteed to be successful. According to Maull, Tranfield, & Maull (2003), having improved ability to pursue goals while involving distributed units is one of the advantages of effective collaboration. Therefore, if businesses can work together across departments, expertise is utilized in the greatest way possible. Highly collaborative environments facilitate change when there is readiness because both expertise and cross-functional teams can easily function and be switched around to accomplish the desired objectives.

Grover & Malhotra(1997) agrees that through collaboration, people, technology, and information is exchanged, making it a change management tool that prepares the company

for BRP. The concept of division of labor brings about segregation of duties.

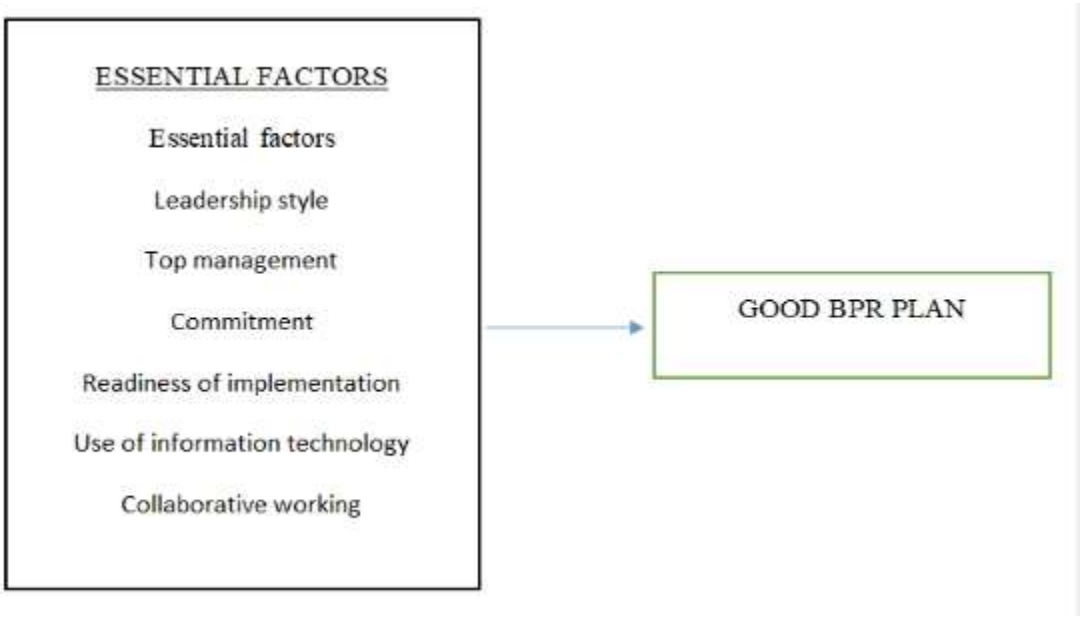

Figure 2.10 ESSENTIAL FACTORS FOR A BRP PLAN

Adopted: European Journal of Business Management Author: Sinclair (2018)

2.18 Factors to Consider in Readiness for Change

2.18.1 Leadership Style

This factor has a significant impact on the organization's environment and is the driving force behind its performance. Top managers provide a vision for change, which encourages employees to be willing to undergo the envisioned change process, especially when a supportive leadership style fosters readiness for change. Leaders have the responsibility to build broad assurance and trust among employees. Various theories have proposed enhancing the success of organizational change efforts through creating readiness for change O'Neil & Sohal (1999). In this context, leaders must effectively communicate and educate their team members about the reasons for change. It can also be understood that organizational readiness for change involves unfreezing the status quo in behaviors.

2.18.2 Top Management Commitment

According to (Maull, Tranfield, & Maull, 2003) it is necessary to have a clearly defined strategic mission for re-engineering. The highest level of management is strategic management; it is where top officials determine the strategic direction of the company. It is the responsibility of the top management to keep them abreast about the current situation in the implementation and show high degree of commitment towards ongoing projects. BRP can be made a success if top management improves communication with the employees which is likely to create readiness to change. It has been proven that a committed attitude such as this, results in desirable behaviors including readiness to change essentially required for projects relating to BRP (Jamali, Abbaszadeh, Ebrahimi, & Maleki, 2011).

2.18.3 Use of Information Technology- An integral part to BRP is IT, it has an important role to play in relation to BRP projects, if the role of IT is ignored the result can be failure. (Attaran & Attaran, 2018) The capabilities of IT are that they should support business processes, and business processes should be compatible with the capabilities. All phases of redesign process include IT. Before the process redesigning, it can foster process thinking in that creates readiness for change.

2.18.4 Collaborative Working Environment - The basic concept of collaboration is that people from different departments should be able to work jointly to ensure smooth flow of tasks through the processes. Collaborative working environment is one main factor of determining readiness for change taking place due to implementation of BRP projects. In order to work in a cooperative environment, and interact in a friendly way, employees should trust each other, and be assured that the top management recognizes their role (recognition among employees). A cooperative environment with a friendly interaction, in which employees work in teams, has a chance of improving performance and show that employees are ready for change (Mansoor & Azurin, 2018).

2.19 Challenges in Implementation of BRP

The fact that re-engineering uses various tools and techniques makes the rate of failure very high as well. There are many barriers to BRP implementation according to (Attaran & Attaran, 2018) which include; misunderstanding of the concept, unrealistic objectives, management failure to change, misapplication of the term of BRP, lack of proper strategy, and failure to recognize the importance of people. In order to be successful with BRP, Buchanan (1997:51) notes that BRP deals with the re-engineering of processes and focus should be placed on the entire and not only identify processes for re-engineering. Furthermore, there is a need of establishing a working balance between individual, occupational and AL goals with a consideration of the prevailing AL culture that would promote BRP to a higher state of maturity, as barriers are eminent at implementation stage.

Attaran & Attaran (2018) looks at why systems change initiatives fail and highlights some success factors that s should consider when implementing change. These include; allowing "too much complacency, failing to create a sufficiently powerful guiding coalition, underestimating the power of vision, under-communicating the vision by a factor of ten, permitting obstacles to block the new vision, failing to create short-term wins, declaring victory too soon and neglecting to anchor changes firmly in the corporate culture".

This leads to the conclusion that the thoroughly re-engineered corporation is yet a rarity. The problem would seem that re-engineering of the corporation is not extending to actual management practice. This is typified by three vice presidents (for sales, service, and order-fulfillment) at a major US computer company, who were thrilled that re-engineered work processes promised to cut product introduction time in half, raise customer retention rates by 20 percent, and slice 30 percent from administrative costs in their areas. They were not thrilled enough, however, to willingly give up control of their functional areas and collaborate. As a result, the re-engineering effort died a year after its inception. In this case, senior management's leadership was not strong enough to implement a change in the pattern of shared values, beliefs and rules for behavior and their culture.

BRP has another critical factor where it affects the people for example; customers are likely to have a feel of the changes taking place. Before making decisions, these are the key factors to be dealt with. On the other hand, according to (Hammer & Champy, 2009), s re-engineer their business processes depending on different situations. These situations are categorized as:

2.19.1 Crisis management

Applying measures to deal with a sudden and negative incident is known as crisis management. The group's members are in a crisis and have no choice but to focus on improving current business procedures. Companies who are in extreme crisis and have no other options re-engineer themselves to get out of it. Examples of this include instances where a firm's costs are higher than those of its market competitors or where the amount of resources allocated by its business model to customer service falls short of the needs of its current clients, who openly criticize the company. In other words, the organization needs a significant upgrade to their operations, like re-engineering.

2.19.2 Anticipatory management

Anticipation is an emotion involving pleasure or anxiety in considering or awaiting an expected event. Anticipatory emotions include fear, anxiety, hope and trust. When the anticipated event fails to occur in an, it results in disappointment (if positive event) or relief (if negative event). The group involves systems that foresee a crisis approaching the re-engineering process so that the coming crisis won't affect their business and Market leadership: Companies that are not having any crisis now but the management feels that they are vulnerable to a crisis in the recent future. Additionally, systems that want to continue to be market leaders fall under this category. The re-engineering projects enable them to achieve their dreams by providing a better service than the current one (Burke & Peppard, 1995).

The third category comprises of companies that are doing exceptionally well in business yet have a great possibility to get an advantage over their rivals. Clearly, the aforementioned claims imply that BRP is a technique that can aid in resolving a variety of

business issues currently. Moreover, it serves as an important methodology to introduce changes in large corporates. This methodology can be used to assess, simplify, and redesign elements of the business process. This is hardly surprising as BRP involves rethinking of all business processes that are used to radically reduce the cost of making products or providing services. BRP has been recognized as a daring company management technique that aids in the analysis of its workflows and processes since 1990. In addition, BRP is crucial in assisting companies to rethink their daily operations in order to enhance customer service, cut costs, and outperform the competition.

According to Ahmad, Francis, & Zairi,(2007), in the period of all changes, a majority of the business focus centers on aspects related to efforts in bringing changes to the structure, processes, policies, and procedures of companies, which would have a profound impact on workers, systems, processes, and work culture in some parts of and/ or throughout the organization. To accept such changes and to face potential challenges, it is important to identify exactly the change that is needed and to foresee the extent to which such a change can have an impact. As a result, it is crucial to identify the kind of change and the instruments that may be used to help achieve the necessary change.

Recent developments show that Davenport's methodology is becoming more prevalent given its emphasis on the use of IT as the main driver of change. Moreover, several scholars, such as Addolvand, Albadvi, & Fedowsi,(2008), are of the view that the use of BRP should not be generalized to all business situations, as each type of business has its own unanticipated elements of surprise. Davenport & Harris, (2017) also concur with the above caution, stating that the approach to identify relevant sub-processes deemed suitable for BRP involves a "door-to-door" mapping process that helps improve its utility. Furthermore, such an approach can help us to identify high-value activities and poorly performing activities. In particular, the latter activities are measured and analyzed to determine their negative impacts and methods of disposal.

Process re-engineering in the nature of business

In re-engineering the nature of the business, at this stage, BRP rejects the existing rules and often takes an unconventional route to redo processes from a high-level management perspective. The problem with changing the nature of the business is that, the larger you are, the more expensive it is to implement. However, there are three phases that are followed for a successful Process re-engineering in the nature of business, these include: the pre-phase, the phase, and the post-phase. Business process reengineering in the nature of business is commonly divided into three phases: the pre-phase, the phase, and the post-phase.

The pre-phase

The first phase of BRP in the nature of business is about preparing for change; doing research on your processes to find out where you can improve them or remove redundancies. It also involves understanding what will happen when a new process starts, in order to make it easier for people who are transitioning to the new process. In an accounting firm setting, an example might be looking at different ways to simplify the process for new clients. The goal should always remain maximizing value for the clients – and the process should be something they are willing to put the effort into.

The phase

This is where you start implementing all changes and streamlining processes, which could include training staff on how to do their jobs differently or automating some functions that have previously been done by hand. This can be a difficult time for people who are uncomfortable with change – especially if they don't believe in change. Change is not always easy to accept. This phase is used to offer training and coaching on the new process should be done. If people are worried about change, organisations must always admit that it won't be easy but urge them to give it a try for themselves. This is the time that staff needs to be reassured with some positive feedback – they may not recognize all their hard work in order to make changes happen.

The post-phase

BRP can take a while, and it is important that after implementing changes in one phase the firm continue with more work on other phases. Businesses will typically revisit their BRP strategy every few years but for some firms this may need to happen more frequently. This is the stage were evaluation of the business process reengineering activities that have been implemented is done (Robbins & Judge, 2018). This evaluation process identifies the strengths and weaknesses of the business process reengineering strategy, any problems that may be arising in its implementation or what improvements could be made to it. The post-phase is also an opportunity to assess whether all the benefits anticipated from BRP were achieved successfully.

Conceptual and synthesis literature

Davenport & Harris, (2017) make mention that a business process is an activity or set of activities that accomplish specific AL goals. (Blanchard & Olivier, 2019) We shall review two concepts or approaches of business reform that most systems such as IBM, Toyota, DELL, PepsiCo and Total now Total energies have used and these are the Business Process as well as the practical Implementation of Re-Engineering.

These processes, in these concepts under review involve structured activities meant for solving specified challenges or problems found within the production of a service or product. According to (vdokimova & Llyin(2016) the business processes involve a series of steps that are meant to improve the business activities in an. Therefore, BRP is considered as such an improvement process that aims at satisfying customers by focusing on their needs and how they are used. However, in order for this process to work efficiently, Bradford & Burke(2018) adds that there is need for setting up a number of rules that will guide the business process implementation in order to achieve its intended objectives.

The essentials to business process are that it involves two characteristics namely: involvement of customers and the boundary that transcends the organisations. It performs prescribed set of activities that intend to change an input into an output (goods and

services). Alternatively, this process can also be viewed as a process that involves people and tools as the mediator.

Figure 2.11 shows such development of a business process as conceptualized by Radhakrishnan et AL. (2010).

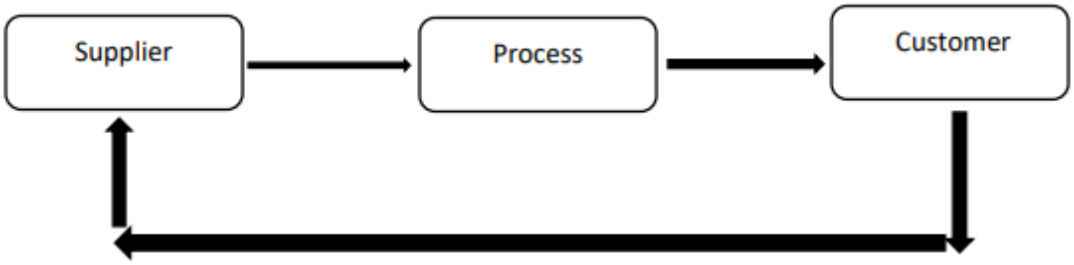

Figure 2.11 THE BUSINESS PROCESS SOURCE; RADHAKRISHNAN ET AL 2010

Anand, Chandrashekar, & Narayanamurthy, (2014) supported the above demonstrated business process where the set of inputs are considered as change for output coming in the form of goods and services. The process includes the use of both people and tools that promote change from input to output.

Bhaskar & Singh (2014) emphasize that the success of most companies revolves around four core business processes, which are crucial for delivering quality products or services and ensuring the company's survival and growth. These four processes include product or service development, order generation, order fulfillment, and customer service. While these processes may vary across industries and companies, they form the focal point of a company's attention.

On the other hand, Blaug, (2018) contends that there is no one-size-fits-all methodology for Business Process Re-engineering (BRP). The implementation of BRP varies based on the unique needs of each organization. BRP is recognized as a significant driver of change in the current business landscape, as it enables organizations to enhance competitiveness

and ensure survival. Unlike other popular business practices such as lean production, Total Quality Management, downsizing, or continuous improvement, BRP involves radical redesigning of business processes to achieve substantial improvements in performance metrics like cost, quality, service, and speed according to (Blaug, 2018).

Burke (2017) Proposed a practical model or steps that has an integrated methodology but could be used in a company such as TAZAMA. The conceptual framework is a six-phase comprehensive reengineering plan which acts as a practical guidance to leaders when implementing BRP for innovation and change. The model includes six phases namely; understanding, initiating, planning, programming, transforming implementing and evaluating.

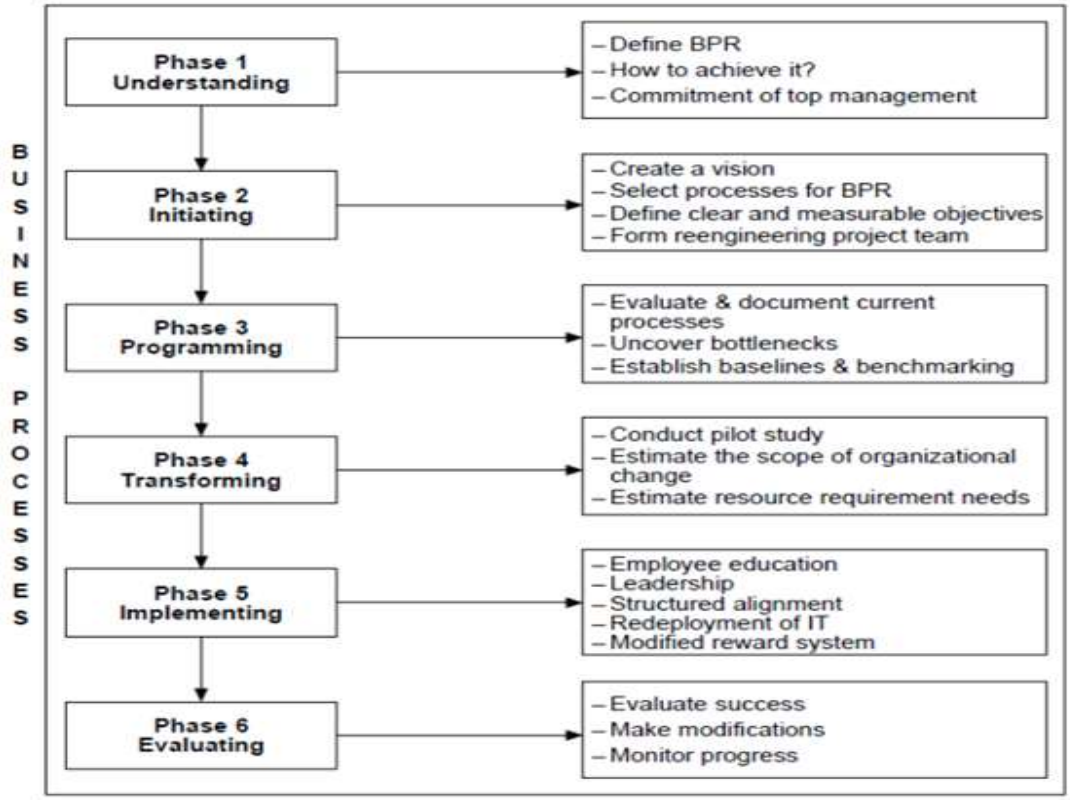

Figure 2.12 Conceptual framework for practical implementation of BRP Source: Alvin and Yoo (2015).

According to this concept, the following happens at each stage:

Phase 1

The senior management understands the need for change and has developed a thorough knowledge of BRP and how they intend to implement it.

Phase 2

In the second stage of the model, a vision is created after the comprehension and commitment have been made. The management chooses the business processes that need to be reinvented based on the clear vision, establishes clear and measurable objectives for the reinvented processes, and creates reengineering project teams for these reengineering initiatives. As suggested by Alvin and Yoo (2015), the teams must include executives and important employees from the primary AL units participating in the processes, as well as from the information systems department.

Phase 3

The project team examines and documents present processes in the third phase, identifies bottlenecks, and sets baselines and benchmarks for assessing future advancements. The project team's efforts are concentrated on this phase on identifying breakthrough opportunities and creating new work procedures or processes that will result in quantum gains and competitive advantage.

Phase 4

In the fourth phase, which is referred to as "transforming," the system is actually transformed. This transition ought to happen in a modest pilot setting. A pilot study aids in the following areas: improving management and employee comprehension of the new process (es); fine-tuning the design of the new process; providing accurate estimations of the AL change's scope and the necessary resource requirements.

Phase 5

The new re-engineered process is fully implemented and integrated after the pilot study is successfully completed. This is the fifth phase. A redesigned reward structure, employee leadership development, structural alignment, and resource redistribution are all necessary for successful integration. Changes enacted during this transformation may cause resistance or resistance, which requires management, the project team, and employees to address through continual communication.

Phase 6

The model's last phase entails comparing the reengineering activities' accomplishments to the performance objectives set in phase two. For instance, if the reengineering efforts have not fully met their objectives, they should be redesigned and changed. This stage is crucial because it involves a sustained commitment to the reengineering process. Business leaders are encouraged to bear in mind the following in addition to these phases: The BRP effort should be well planned and given the reengineering designation; begin small and keep the consumer in mind at all times. Prior to establishing cost-saving goals, come to an agreement on a redesign; involve key persons and services as early as possible; examine and emphasize connections across projects; use a methodical approach to managing change; identify the most important vital components.

2.19.3 BRP Process verses other strategies

Various factors contribute to the adoption of specific business strategies. Global trends, such as the prevalence of globalized services and products, climate changes, resource scarcity, and growing awareness of social and environmental responsibilities, along with intense competition, have compelled organizations to carefully consider the most suitable business strategy for their competitive environment.

In today's dynamic business landscape, relying solely on having the right products and services is no longer sufficient for maintaining competitiveness, as the lifespan of products is limited. Management must decide whether to opt for a radical re-engineering strategy or a more gradual continuous improvement approach, such as Six Sigma or Lean Production,

depending on the scale of change required, its feasibility, and the necessary resources for successful implementation (Davenport, 1993; 2009). While these management approaches share certain principles and adopt process perspectives, they offer various options for driving organizational change.

Concerning business improvements, most companies are faced with the choice whether to adopt a radical re-engineering approach (BRP) to change or to simply apply a more gradual continuous approach, for example, Gemba Walks, TQM, lean thinking, Six-Sigma or Kaizen. However, the choice of an approach depends on the magnitude of the needed change, the feasibility and the availability of resources for accomplishment of the change management process. The following are the other business strategies that are used:

2.19.4 Lean Thinking

Lean thinking is a transformational (Aguilar-Saven, 2004) framework that aims to provide a new way to think about how to organize human activities to deliver more benefits. (Attaran & Attaran, 2018).

In their study from the late 1980s, James Womack and Daniel Jones proposed the idea of lean thinking. They cover the success of Toyota Motor Company, which employs the cutting-edge Lean Production approach, in great detail in their study. With the help of this production method, this corporation was able to outperform its two main competitors, Ford and General Motors, in terms of business operations. Anand, Chandrashekar, & Narayanamurthy,(2014) use the Lean methodology to identify values, create a list of those values, plan the best course of action based on the list, and complete the necessary tasks without any hindrance. As a result, this technique aids in the elimination of wastes that are unnecessary for the production of goods or services. Given its significant influence on manufacturing procedures, Aguilar-Saven(2004) writes that lean is now being widely applied to many other fields as well. Lean is the foundation on which a company may assist foster thinking and evaluating abilities that result in ongoing changes to the work culture, according to Indulska, Recker, Roseman, & Green(2009). Anand, Chandrashekar, & Narayanamurthy, (2014) go on to say that in order for a business to successfully implement Lean, its top management must foster a new philosophy about Lean. As a result, Lean is

concerned with more than just "a set of tools" but also a fresh method for handling everyday business operations. Similar to other management methods, Lean has its own implementation process that consists of the following five steps:

Step 1: Identify values that are highly required by clients.

Step 2: Determine the value flow, which entails actions to quantify such values. Each step will be analyzed in this phase in an effort to cut waste, mistakes, redundancy, and bureaucracy.

Step 3: Create the flow of values without any elements of wastes or unwanted excesses.

Step 4: Perform manufacturing according to the choices made by the customers.

Step 5: Continue working for perception through systematic work by focusing on what has been done, who has performed it, and what has been done with it.

Additionally, Gitlow(2009) asserts that Lean is effective in solving chronic problems, because it uses a number of tools, such as Value Stream Mapping (VSM) and that it helps solve such problems with better precision. The scholar also contends that VSM can be used as a method to provide an overall picture and understanding of management with regard to problem solving.

2.20 Six Sigma

Motorola originally adopted Six Sigma as a manufacturing process model in the US in 1985(George, 2003). George, (2003), further states that Six Sigma is a very effective strategy for enhancing manufacturing, service, and industrial transactional business processes. In order to improve the company process, George, (2003) defined Six Sigma as a scientific management style of infusion that combines a variety of creative and technical approaches of change management, tools, and procedures.

According to the Six Sigma philosophy, many business issues can be resolved with a solid knowledge of the significance of decreasing discrepancies. The management team will be

able to examine fluctuating processes using a statistical tool, which will allow them to forecast the necessary decisions from such processes. If the outcomes are poor, more techniques in a relevant field will be employed to learn more about the factors affecting such processes. As a result, Six Sigma assists practitioners by removing any potential sources of variance so that they may concentrate on optimizing the business process.

DMAIC, which stands for Define, Measure, Analyze, Improve, and Control, is the Six Sigma approach. Analytical tools, management program tools, data collecting tools, and online projects tool for global and local teams (DMAIC) are the four types of tools that are frequently utilized with Six Sigma. The steps of DMAIC are as follows:

Step 1: Define - The team must ask each other the following questions to help in problem-solving during this extremely difficult step: What is being done right now? Why is it important to resolve this issue? The clients' names? What needs do the customers have? How is the task carried out? What advantages come with improvements?

Step 2: Measure - This step has two main objectives as follows:

To collect data that helps validate and measure the problems and to determine opportunities that can be gained from solving such problems. To create a numerical indicator for the sources of the problems.

Step 3: Analysis - In this step, the team will identify the details of the processes to help gain a firm understanding of the prevailing problems.

Step 4: Improve - In this step, the team will perform the required actions to solve the problems. In addition, the team can alter the scope of their project based on their improved understanding of the problems and processes. Once the objectives are set, the process of planning to achieve the aims will be conducted.

Step 5: Control - The main objective of this control step is to prevent them from repeating its old practices and processes. The control step is specifically performed to do the following: To develop a monitoring process to detect changes that have been determined;

To prepare an action plan to overcome any potential problems; To help the management team to focus on critical measurements by providing them with the latest information regarding the outcomes (Y) of the project and the main process measurement (X); Additionally, Six Sigma has another vital tool, namely DMADV, which stands for Define, Measure, Analyze, Design, and Verify. While DMAIC is used to improve or to upgrade a project that failed to meet users' needs, DMADV is an enhanced system that can help develop a new project that fulfills users' needs and the objectives of the project.

Gitlow(2009) stated that Six Sigma became popular with AL leaders because of its ability to provide for better quality products that cost less to make and its connection with helping an to achieve a sustainable competitive advantage. Because AL leaders experienced a sustainable competitive advantage when they used Six Sigma, industry leaders outside of manufacturing adapted and altered as needed Six Sigma's methodology for their purposes.

2.20.1 Kaizen

After the Second World War, Training within Industry (TWI) created this concept. This approach has benefited many people and is still in use today. According to Anwar et al. (2013), the term "Kaizen" refers to a positive shift that motivates someone to take baby steps toward improving things that are viewed negatively. Kai specifically implies a shift or an activity to bring about a change, whereas Zen specifically means good. Kaizen is actually referred to as Ringgit, which is a system that engages all employees, from top management to general employees of an organization. Each task will be carried out constantly under such a system, and each employee will be encouraged to offer any suggestions, no matter how minor, to enhance the company process.

Additionally, it is asserted that in order to ensure that the activities of Kaizen are carried out successfully and in accordance with the suitability of the intended process, Kaizen cannot be isolated from the elements that form the basis of the improvement process. Plan, Do, Check, Act (PDCA), Total Quality Management (TQM), Five S (5S), Total Productive Maintenance (TPM), and Just in Time (JIT), Hortense, Five Why (5W), Mieruka, and Genchi Genbutsu are a few of the crucial processes in this approach.

Furthermore, it claimed that if the necessary continual improvements are not made, an existing process will deteriorate, incurring a significant expense to improve it later, according to the Kaizen model. This system places a focus on little, gradual advancements that, over time, will provide significant results. As a result, this technique takes a low-risk approach and will undoubtedly produce favorable results over time.

According to the assertion, Kaizen does not promote radical change but rather emphasizes steadfast devotion and careful planning to continuously look for tiny ideas for improvements. Additionally, since Kaizen is a never-ending process required to create new things that are constantly better than their predecessors, it must be stopped when an objective is achieved. Imai (2018) (quoted in Remy, 2019) asserts that Kaizen has its own philosophy in this regard. It is a series of continuing changes that involve both management and employees. In accordance with the kaizen idea, "our way of life deserves to be constantly improved." Continuous improvement is referred to as Kaizen, while process improvement is referred to as Kairos. The Kaizen methodology can be described as follows:

Firstly, the change process involves all of the organization's employees. Secondly, adjustments are made to methods or processes. Thirdly, modifications are made frequently and progressively. Fourthly, the team is the primary enabler or driver of the change-related activities. While Carnerud, Caremen, & Ingela(2018) further developed Kaizen as a concept that focuses on enhancing a work place or by removing waste in small increments. Any area that needs development can use Kaizen. Industries specially manufacturing ones are currently facing conflicting pressure to improving customer satisfaction and service as well as pressures of cost reduction, reducing lead-time, and quality improvement in order to get better results.

2.21. Total Quality Management

Total quality management is a structured approach to overall AL management. The focus of the process is to improve the quality of an organization's outputs, including goods and services, through the continual improvement of internal practices (Kaufman & Zahn, 2010). The standards set as part of the TQM approach can reflect both internal priorities

and any industry standards currently in place. Industry standards can be defined at multiple levels and may include adherence to various laws and regulations governing the operation of a particular business. Industry standards can also include the production of items to an understood norm, even if the norm is not backed by official regulations.

2.21.1 Primary Principles of Total Quality Management

According to (Kaufman & Zahnm, 2010), TQM is considered a customer-focused process that focuses on consistently improving business operations management. It strives to ensure all associated employees work toward the common goals of improving product or service quality, as well as improving the procedures that are in place for production. There are a number of guiding principles that define TQM (Thapa, 2011)

2.21.2 Focus on Customers

Under TQM, the customers define whether or not your products are high quality. Customer input is highly valued, as it allows a company to better understand the needs and requirements in the manufacturing process. For example, customer surveys may reveal insufficient durability of goods. This input is then fed back into TQM systems to implement better raw material sourcing, manufacturing processes, and quality control procedures.

2.21.3 Commitment by Employees

For TQM to be successful, employees must buy into the processes and system. This includes clearly communicating across departments and leaders what goals, expectations, needs, and constraints are in place. A company adopting TQM principles must be willing to train employees and give them sufficient resources to complete tasks successfully and on time. TQM also strives to reduce attrition and maintain knowledgeable workers.

2.21.4 Improve Continuously

As a company learns more about its customers, processes, and competition, it should gradually evolve and strive for incremental, small improvements. This concept of continuous improvement helps a company adapt to changing market expectations and

allows for greater adaptability to different products, markets, customers, or regions. Continuous improvement also drives and widens the competitive advantage a company has built over related companies.

2.21.5 Adherence to Processes

TQM's systematic approach relies heavily on process flowcharts, TQM diagrams, visual action plans, and documented workflows. Every member along the process must be aware and educated on their part of the process to ensure proper steps are taken at the right time of production. These processes are then continually analyzed to better understand deficiencies in the process.

2.21.6 Strategic and Systematic Approach

A company's processes and procedures should be a direct reflection of the organisations vision, mission, and long-term plan. TQM calls for a system approach to decision-making that requires a company to dedicate itself to integrating quality as its core component and making the appropriate financial investments to making that happen. It has huge financial implications for the company that can affect the strategic position of the company as well as its going concern status. This is perhaps one of the reasons why as a change management approach, it can be used instead of BRP or any other methodology such as Lean management or Kaizen.

2.21.7 Data Utilization

The systematic approach of TQM only works if feedback and input is given to evaluate how the process flow is moving. Management must continually rely on production, turnover, efficiency, and employee metrics to correlate the anticipated outcomes to the actual results. TQM relies heavily on documentation and planning, and only by utilizing and analyzing data can management understand if those plans are being met.

2.21.8 Integrate Systems

A way in which systems can be integrated is by utilizing data. According to TQM plans, systems should communicate with one another, share important information across departments, and make informed decisions.

Another department should have immediate access to the ERP data when items or inventory are utilized in one area. By linking data sources and sharing information across systems, TQM aims to enable everyone to be on the same page at the same time, achieving the same overall goal that ultimately affects the company's profitability or going concern status.

2.21.9 Communication

Despite the ease with which data may be shared between departments, there is a human element to coordinating processes and making sure an entire production line is operating efficiently. Effective communication is critical to TQM in order to inspire employees, educate participants throughout the process, and prevent process errors, regardless of whether it concerns routine daily operations or significant AL changes. Every unit contributes to the general goals of the organization, and it encourages management to communicate with all of them.

TQM Principals and Practices

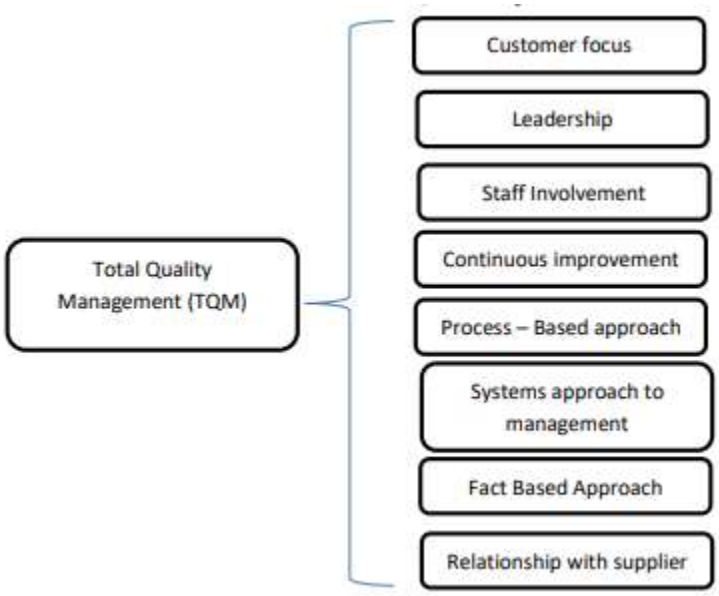

Figure 2.13 TOTAL QUALITY MANAGEMENT COMPONENTS, SOURCE: (CREECH, AND BILL: 2018)

2.21.10 Significance of Total Quality Management

Total Quality Management is important due to the fact that organizations that have the intention of thriving and surviving in competitive and international contexts, must effectively achieve their goals and outcomes. In order for this to be achieved, organizations need to create and execute management systems that enable them to set policies, assign roles and duties, identify and develop essential activities, and measure and improve TQM. (Deming, 2017).

Total Quality Management is a strategic approach that places an emphasis on encouraging a steady stream of progressive quality improvements. It promotes the development of a collaborative culture among the various organizational departments. The point of focus is mostly on a management style and cultural drive for improved quality. Due to the fact that TQM is founded on this idea, the vision and mission statement made by the organization are kept as its axis. The right determination of objectives and goals serves as the first step

in directing the organization and its approach to problem-solving. One of the foundations of lean manufacturing is TQM, it initially contributed with its strategy for establishing a shared business culture of unwavering dedication to efficiency.

2.21.11 Advantages of Total Quality Management

According to Deming (2017), the advantages of TQM include:

Cost reduction

When applied consistently over time, TQM can reduce costs throughout, especially in the areas of scrap, rework, field service, and warranty cost reduction. There can be a stunning boost in profitability because these cost savings translate directly to bottom-line earnings without any new charges.

Productivity improvement

Owing to workers spending a lot less time looking for and correcting errors, productivity increases dramatically. As a result, more output per employee translates into higher productivity, which often leads to more profitability.

Customer satisfaction

There should be fewer customer complaints as a result of the company's improved products and services and relatively error-free client encounters. Fewer complaints can also allow for a reduction in the resources allocated to customer support. As current consumers promote the business to their friends and family, a higher level of customer satisfaction may result in a gain in market share.

Defect reduction

Rather than inspecting quality into a process, TQM places a great emphasis on enhancing quality within a process. This not only cuts down on the time needed to rectify errors, but also lessens the need to hire a group of quality assurance staff.

Morale

Employee morale can be significantly seen to improve as a result of TQM's continuous and shown performance, and particularly as a result of employees' involvement in that success. This decreases employee turnover, which lowers the cost of recruiting and training new hires.

Areas best Suited to implement TQM

Examples of situations where TQM must be used include the following: TQM functions best in a setting where it has the full backing of management, it is put into practice by employee teams, and there is a constant emphasis on process improvement to ward off errors. Any area of a firm, including accounting, field service, finance, legal and administration, maintenance, manufacturing, materials management, research and development, sales, and marketing, can successfully adopt TQM. There are so many arrears' instances or situations where TQM can best be applied. The following circumstances call for the application of TQM:

Concentrate primarily on productivity, not quality, unclear or non-systemic vision where there is lack of teamwork, delivery being delayed, a surplus of inventories, problems with product quality, rising prices, insufficient attention paid to both internal and external customers, Lack of clear objectives in employee participation, training, support, and follow-up on poor communication. There is a lack of ongoing human resource development rising prices, lack of statistical data for decision-making and implementation in processes, over-adjustment, chaos in the offices and plants, paying attention to managing for results alone rather than the ongoing process improvement, unaligned reward and incentive systems.

2.22 Gemba Method

Gemba is a Japanese word meaning "the actual place." In lean practices, the Gemba refers to "the place where value is created," such as the shop floor in manufacturing, the operating

room in a hospital, the job site on a construction project, the kitchen of a restaurant, and the workstation of a software programmer(Imai and Masaaki 2018).

A popular approach in companies who implement lean principles is called "Gemba walks," which denote the action of going to see the actual process, understand the work, ask questions, and learning from those who do the work (showing respect to them). It is an opportunity for management and support staff to break away from their day-to-day tasks to walk the floor of their workplace to identify wasteful activities and provide solutions in the short and long term. The objective is to understand the value stream and its problems, rather than review results or make superficial comments from their office or conference room (Imai and Masaaki: 2018).

It's a common issue when a complex project is underway: the people involved lose sight of the detailed work that goes into the very process they are trying to improve. A real-world problem that impacts the company's profits and customers' experience can become more of a theoretical abstraction, reduced to data reports and endless talk about the issue around a conference table.

Recognizing this problem, process improvement leaders at Toyota developed what they call a Gemba Walk. The translation of the term from the root Japanese word is "the real place." It also is known as "the place where value is created." Castle, Andrew; Harvey and Rachel (2019). In the practice of Lean and Six Sigma, it means taking the time to watch how a process is done and talking with those who do the job for the sake of finding solutions to challenges that impact the organisation negatively. That moves it from an abstraction to a real-world challenge. While it started in manufacturing, the Gemba Walk has been applied to process improvement across many industries. These include software engineering, marketing operations and customer service centers crude oil distillation, beer processing – wherever the actual action that is the focus of a project is taking place.

2.22.1 Gemba and Leadership

The Gemba Walk was developed by Toyota. Many of the Lean and Six Sigma techniques still in use today were invented by the multinational car maker. Many have used the Toyota

Production System as a benchmark because of its emphasis on removing all waste from an activity. Toyota, like other wise businesses, recognized how the dedication and deeds of leaders affect an entire operation. The Gemba Walk was created by the corporation to allow managers and executives to visit the factory floor and observe how a certain process is carried out rather than working in a vacuum.

Leaders are able to identify the discrepancy between what they believe is happening and what is actually happening due to this in-person observation, and they can then create solutions for any problems that arise. In addition, it allows them to connect with the workers and visit the actual location where the work is being done rather than just envisioning it from a distant conference room. Leaders may create a cooperative environment in their company that encourages staff to offer even unpaid suggestions and input by focusing on the operation, listening to them, and taking the time after a Gemba Walk to reflect on what needs to be done. Additionally, they avoid instilling the notion that Gemba Walks are intended to be used as a pretext for taking disciplinary action against specific employees, which is a sure way to undermine the process.

2.22.2 Adaptation of the Gemba Walk

The Gemba Walk was first used in manufacturing; however, it is now used in many different industries. This is so that, regardless of the type of work being done, managers and project team members can reconcile the vertical and horizontal nature of all (Castle, et.AL:2019).

They are, in essence, vertically structured, which promotes the idea that those "below" look to those "above" for leadership. Process leaders should be more concerned with the actual product or service being offered than the organizational structure because it moves horizontally through an organization and eventually reaches customers. Some leaders get it, Amazon CEO, Jeff Bezos employed a variation of the Gemba Walk by having all managers temporarily work in customer service. This enables them gain a greater understanding of the company's direct interactions with the public as a result.

Additionally, some people in the service sector have adopted it. Spending time with employees who deal with the public provides leaders with a different perspective on what the public wants, which can result in the creation of new services and products to satisfy anticipated demand. Castle, et.al 2019).

2.22.3 Getting Employee Buy-In

Getting input from employees on what is doing well and poorly in a particular business is a crucial part of a Gemba Walk. Explaining that the benefits of a Gemba Walk goes beyond enhancing a product or the company's bottom line, might help you gain employee buy-in. There are several efforts that make the workplace significantly safer. Process improvement initiatives identify areas where minor adjustments to a process can significantly reduce safety risks.

That's good for workers as well as a company – there is an estimation by the U.S. Occupational Safety and Health Administration (OSHA) that businesses spend $170 billion in a year on costs relating to injuries and illness in a workplace, this then costs the companies lost production hours and eventually, profits. If a Gemba Walk is done properly, it can have a dramatic impact. By closely observing "the place where value is created" and listening to employees, project leaders and business managers give themselves a fresh perspective on the business and new insight into how changes can make products, processes and services better for customers(Imai and Masaaki: 2018).

As a result of the difficulties encountered with various reform projects, change management programs like rightsizing, restricting, automating, TQM, and BRP have evolved. BRP was discovered to have similar effects on organisations a result of the modifications it can cause. Re-engineering, which is a method that focuses on process rather than on job responsibilities or bottom-up improvements, is what distinguishes BRP from other change management program approaches. In contrast to the previous change programs, the shift in BRP is drastic rather than progressive. However, Grover & Malhotra,(1997) highlight the fact that BRP and TQM have similarities, despite the fact that BRP calls for radical and significant changes in business processes whilst TQM emphasizes continual development.

As Davenport & Harris,(2017) point out, re-engineering goes beyond restructuring of new processes, but it entails “envisioning of new work strategies, the actual process design activity, and the implementation of the change in all its complex technological, human and AL dimensions”. As a result, it is probable that BRP affects more than one area (process). (Aguilar-Saven, 2004) It should be observed that “process thinking has taken a more prominent place with regard to process innovation”

2.23 Business Process Re-engineering (BRP) as the Current Best Methodology

The assessment of the four techniques' fundamental strengths and weaknesses showed that BRP has an advantage over the other three. By analyzing, simplifying, and restructuring problematic or ineffective processes that already exist, BRP specifically has the capacity to bring about a dramatic overall transformation to an organization. From a philosophical perspective, BRP also entails rethinking the business process, which can significantly lower the cost of goods or services.

Historically, dating as far back as 1990, BRP is a powerful management strategy accepted by many prganisations and firms around the world. This is attributed to its nature of focusing on analysis and workflow that is found in the business processes practiced by the firm. Many organisations through the use of BRP have been influenced to rethink the daily routine works that have the capability of introducing profound effects on customer services such as: saving time, reducing operational costs and placing firms as world-class competitors.

Attaran & Attaran,(2018) in agreement with Anand, Chandrashekar, & Narayanamurthy(2014) noted that, for such improvements to occur, there is need for such organisations to redesign business processes. Therefore, a number of business techniques created for new business processes are appropriate and suit the current business environment, which enables us to improve performance. To this effect, according to Ventraman(1994), most of the systems use IT as an indispensable tool in reducing the cycle time in fulfilling customer needs. Additionally, the use of IT in BRP helps in reducing dishonest and unethical activities and it helps to increase the information's accuracy and

security in an organization. Moreover, IT is known for fast communication with the capability of improving quality, services and products in the industry.

IT is sought as a conventional way that automates force rather as an advanced method that is meant to reshape the business in this modern era. Examining the use of IT in BRP processes reveals that each phase of the business process records faster, better and cheaper solutions. El Sawy (1997) agrees that before choosing BRP as a method of improving a business for any organization, it is compulsory that IT is understood. Therefore, failure to comprehend and align the way IT is used in BRP can result in a failed implementation of the available resources leading to wastage. In order for a successful implementation of BRP, knowledge in IT plays a significant role because it shortens time taken in completing the task or process.

Moreover, the use of IT in BRP proves its vitality because the demand to blend process management with workflow management systems and application intervention is inevitable. BRP involves the control of processes by executive, administrative, and supervisory levels to ensure that company objectives are met, changing processes as well as information technology, AL structures, management, and personnel. Therefore, BRP should be used as a tool to meet consumer needs since its outputs must satisfy both customer needs and company AL objectives Oberi, (2013: 294).

BRP's key success aspects are noted as "-wide commitment, BRP team composition, business needs analysis, adequate IT infrastructure, effective change management and ongoing continuous improvement" (Hussein, Bazzi, Dayekh and Hassan ,2018). It is clear that there are some similarities between the principles for the management of change as stated by Hammer and the success criteria offered by Hussein et al. in Hammer (1992). It identifies the as traditional re-engineering since it solely focuses on attaining dramatic improvement and does not specify how the wide commitment is accomplished.

However, BRP also has critics; for example, issues in relation to re-engineering as identified by Al-Mashari, Irani, & Zairi (2001) "BRP appeals to senior managers because it promises the quickest shortcut to success and business excellence; the concept itself has

a lot of appeal because it is simple to absorb and its rules are not too complex; BRP promises immediate benefits and major leaps in competitive performance which makes it prone to managers overlooking its pending challenges. Failure to address challenges at the start of the business process may result in catastrophic losses because any slight changes will affect the whole production.

BRP is very compatible, in western countries because the focus is on short-term profit-making basis. In short, promotion of BRP becomes a better alternative to other business strategies such as TQM regardless of its impact on the organization. Issues arise in cases where, BRP is less costly to implement and guarantees real benefits much more quickly which makes it vulnerable to shortcomings. BRP in most cases refers to the implementation of hard solutions dealing with soft problems, thus suggesting that use of IT for instance will go a long way to making business more effective and securing future competitiveness". However, when researchers started examining how successful BRP is, it became clear that organizations that have employed it would desire to use TQM to support their BRP efforts and promote the integration of the two systems. As a result, Grover & Malhotra, (1997) advises starting reform with other business tactics and continuing with BRP for a success that is guaranteed.

2.24 Theoretical framework

This section presents the theoretical framework for the study. The institutional theory, Resource Based View (RBV) and the Higgins' 8-S framework are the main theories that support this study.

2.24.1 Resource Based View theory

The primary theoretical framework informing this research is the Resource-Based View (RBV) theory. According to the Resource-Based View (RBV), organizations achieve a competitive advantage through the strategic utilization and enhancement of their resources, including assets and capabilities (Wanyanga, 2019). Consequently, in order for organizations to have a competitive edge over their counterparts, it is imperative that they possess superior resources in comparison to their competitors (Ruivo, Oliveira & Neto,

2015). This theory suggests that firms can achieve sustainable competitive advantage by possessing and leveraging unique, valuable, rare, and inimitable resources. In the realm of the public sector, the RBV theory enables the generation of public value through the strategic utilization of an organization's strengths and assets (Wanyanga, 2019). In general, the RBV places its emphasis on two primary constructs, namely competences and resources (Bryson et al., 2019). Resources encompass several capabilities, including human, monetary, physical, and technological aspects. On the other hand, competencies, encompassing management and transformational abilities, can be regarded as a subset of resources such as technical actions, operational process knowledge, and technical capabilities.

This RBV has been found to be of great importance to this research where BRP represents a strategic resource that can be employed to ensure sustained performance of organisations such as TAZAMA Pipelines Limited. According to Wanyanga (2019), the resource viewpoint of BPR posits that the impact of BPR on performance may be attributed to the specific characteristics and magnitude of the financial, technological, and human resources utilized during the implementation of a BPR initiative. The RBV is highly pertinent to the examination of business operations, since it aligns with the fundamental objective of businesses to achieve their goals, which includes customer satisfaction (Wanyanga, 2019). In order for an organization to enhance its service delivery, it is necessary to periodically engage in the redesign and restructuring of its processes to align with prevailing business and customer orientations. RBV theory thus fit this study as it helped conceptualize how BRP as a resource contributes to firm performance at TPL. In conclusion, the theory provides valuable insights into how firms such as TPL can leverage their internal resources to implement BRP initiatives to gain sustainable performance. Thus, this theory was adopted and aided in the development of the conceptual framework as the main constructs drawn from this theory are resource (in this case BRP) and firm performance.

2.24.2 Institutional Theory

Institutional theory advocates for the use of technology as an enabler to gain competitive advantage. This theory supports that the performance which is attributed to external and

internal environmental factors includes competition, technological advancement, political pressures and accounting standards. Institutional theory identifies internal and external environmental factors which determine the performance of an organization. The internal factors can either be environmental or coercive. Environmental factors include competition, technological advancements and economic constraints. While coercive factors entail accounting standards and financial legislation and finally socioeconomic and political institutions pressures. The behaviors of any theory could be disclosed and researched (Hussain & Hoque, 2002). There are groups included in external factors namely mimetic factors and normative factors. Mimetic factors involve copying the best practices from others while normative factors have a variety of aspects. It involves professionals in different areas, strategic orientation, and corporate culture and all characteristics. Therefore, if institutional factors influence could be analyzed in all levels, it would mean that they also influence the systems and processes.

The relevance of institutional theory in understanding BRP implementation cannot be overstated. BPR, a management approach aimed at improving efficiency and effectiveness by redesigning business processes, has gained significant attention in recent years. However, its implementation and success are contingent upon various factors, including the institutional context in which it is applied. Institutional theory posits that organizations are influenced by external forces such as norms, values, and regulations that shape their behavior and practices. These institutions provide a framework within which organizations operate and make decisions. When implementing BPR initiatives, organizations consider the existing institutional environment to ensure compatibility between new processes and prevailing norms. For instance, if an organization operates in an industry with strong regulatory oversight or cultural traditions that resist change, it may face challenges when implementing BPR initiatives that deviate from established practices. Institutional theory helps explain how these external forces can either facilitate or hinder the success of BPR projects. The theory therefore aided in explaining the factors that influence BRP implementation at TPL as well development of the conceptual framework.

2.24.3 Higgins' 8-S framework

The other theory underpinning the research is the 8-S framework developed by Higgins (2005). Higgins (2005) developed a heuristic strategy implementation framework that encompasses eight key elements, namely strategy, structure, system, staff, shared goals, style, resource, and strategic performance. Higgins (2005) introduced the concept of the 8th S component, known as Strategic performance, as an extension of the original McKinsey's 7-S framework. This additional component emerged from the interplay and interdependence of the seven existing components within the framework. As a result, Higgins proposed the revised 8-S framework, which offers a comprehensive approach for implementing strategies within organizational contexts (Kanyangale & Sibanda, 2021). The primary objective of the 8-S model is to enhance management's ability to effectively and efficiently supervise the implementation of strategies across several functional areas. The 8-S model places emphasis on the notion that a strategy is formulated with the explicit purpose of attaining a particular objective. According to Higgins (2005), the successful implementation of multiple strategies necessitates distinct structures, procedures, styles, staffing, resources, and shared values. In accordance with the 8-S framework, the alignment of key organizational elements with the desired strategy is crucial for the effective execution of strategy (Munyao, 2019). The model delineates the eight aspects that are deemed crucial for the successful implementation of strategies.

8-S Framework (Higgin, (2005)

The Higgin 8-S model, effectively highlights the interconnected nature of strategy implementation components. According to Kumar and Sushil (2015), the successful implementation of strategies is contingent upon various factors, one of which is the effective utilization of systems and processes. In this context, systems and processes pertain to the formal and informal procedures and policies that are employed inside an organization to facilitate the achievement of strategic objectives. Conversely, there exists a concept known as style, which pertains to the many leadership styles utilized in the process of executing strategic initiatives. According to Higgins (2005), the 8-S model characterizes style as the leadership approach demonstrated by managers or leaders in their interactions and communication with various stakeholders during the implementation of

strategic initiatives. Furthermore, the second 'S' in the 8-S model denotes the element of staff. According to Kanyangale and Sibanda (2021), the 8-S framework conceptualizes staff as the human resources necessary for facilitating the attainment of a strategic objective. This component delineates the requisite number of individuals, together with their respective backgrounds, skills, talents, propensities, attributes, and qualities. Furthermore, it encompasses several staffing-related considerations such as the training, salary, incentives, and career progression of personnel (Higgins, 2005).

According to the framework, resource availability is very critical towards successful implementation of strategies as a strategy cannot be successfully implemented without marshalling additional resources such as money, human resources, information, technology and time (Kumar & Sushil, 2015; Munyao, 2019). Higgins (2005) puts forth that it is crucial for managers to make sure that stakeholders have full access to the necessary resources, such as materials, personnel, money, technology, and other management systems, during the process of implementing a strategy. More so, there is the component of shared values which relates to organizational culture (Kanyangale & Sibanda, 2021). Lastly, the 8-S model views strategic performance as a derivative of the other seven 'S's which also represents successful strategy implementation (Higgins, 2005). This 8-S framework is relevant to present study as it aids in explaining some strategies for effective implementation of BRP at TPL. More importantly, the framework was employed in developing the conceptual framework for the study.

2.24.4. Nudge Theory

According to Carsta & Tagliabue(2018), A concept in behavioral economics, decision-making, behavioral policy, social psychology, and allied behavioral sciences known as "Nudge theory" suggests using adaptive designs of the decision environment (also known as "choice architecture") as a means of influencing group or individual behavior and decision-making. Comparing nudging to other compliance strategies like education, legislation, or enforcement, Nudge theory relies on subtle, indirect suggestions that are backed up by evidence so that employees will be nudged in the direction of change that an individual desires. The premise is that "nudging" change is more effective than strictly

enforcing change. Below are the theory's basic principles: Define changes; consider employee point of view; provide evidence to show the best options; present change as a choice; Listen to employee feedback; limit options; solidify change with short-term wins.

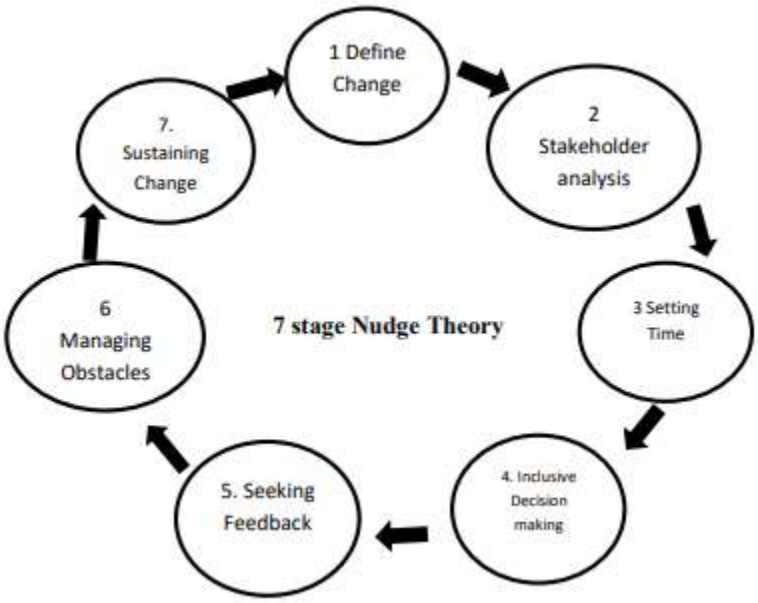

Figure 2.16 NUDGE THEORY, SOURCE: CARSTA & TAGLIABUE, (2018)

Employees are able to see the need for change and influence how the change is made, making resistance less likely with the aid of the Nudge theory. The change can be one that improves production efficiency, reduces waste, and like a parent would with a child, it guides employees towards the options management wants them to choose. The beauty of this change management framework is that it aims to get the full support of ones employees, while still making them feel a part of the process of choosing and managing the change.

Nudge theory is best used in conjunction with another model. Nudge theory allows employees to see the need for change for themselves and influence how it is made, making resistance less likely. Like a parent would with a child, it guides employees towards the options management wants them to choose. The beauty of this change management framework is that it aims to get the full support of your employees, while still making them feel a part of the process of choosing and managing the change. Nudge theory is best used in conjunction with another model.

2.24.5. Kotter's Theory

Kotter's Theory for Change Management, developed by Harvard Business School professor John P. Kotter, is broken down into eight stages: Create a sense of urgency; Build the change team; Form a strategic vision; Communicate the vision; Remove barriers to change; Focus on short-term wins; Maintain momentum; Institute change.

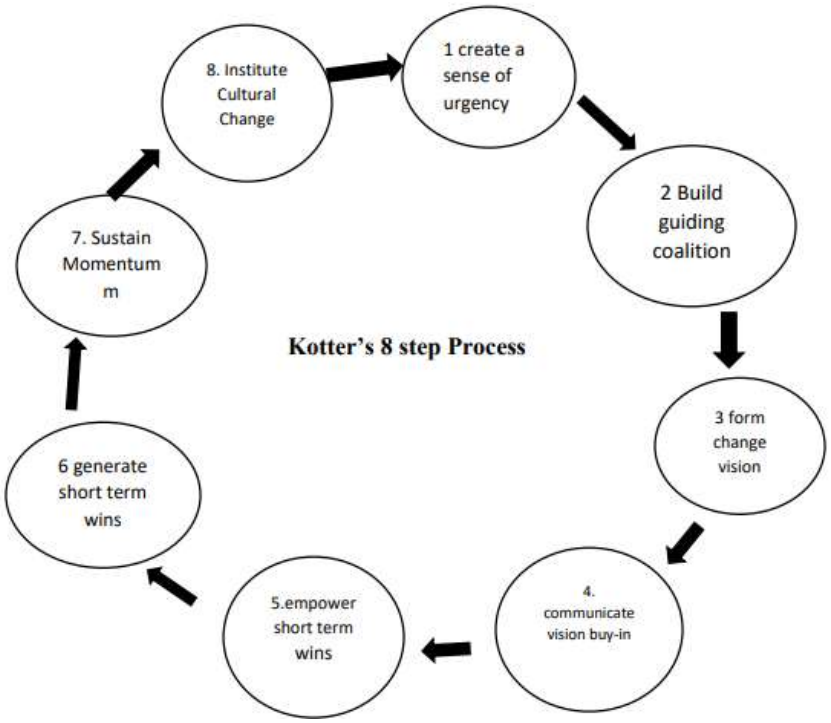

Figure 2.17 Kotter's 8-Step change model 1, Source: (Kotter, 1996)

Katter's 8-Step Change Model does a great job of building enthusiasm and understanding the need for change by building a checklist that serves as a guide.

However, this top-down model neglects to include a stage that calls for employee feedback, so there is a risk that employee resistance will stall the process. For larger companies, it can work very well. But for smaller companies, in which feedback is critical and expected, employee risk resentment and alienation.

Deming Cycle (PDCA)

Dr. Williams Edwards Deming originally developed the Denning Cycle which is also referred to as the Plan-Do-Check-Act (PDCA) cycle. This framework focuses on process improvement and is divided into four phases: Plan, Do, Check and Act. The four phase's help you identify the issues that need addressing, tackle those problems through change, and keep the pulse on the implemented changes to see if further action or adjustment is needed.

PDCA is designed to work on a loop hence why it is called a cycle instead of a model. During the planning stage, you identify problems and ways in which they can be solved, thereafter, the changes are put into practice on a limited scale, most likely inside a single team or a single small department. Next process is evaluation and track development to see whether this change needs modifications, and appropriate action is then taken. Acting might entail carrying out the change in other divisions of the business or returning to the planning phase. This change management framework functions best when changes are tested first on a small team or department and results are monitored before changes are made company-wide

2.24.6 MIT 90S FRAMEWORK

The most fundamental implicit orientation of the BRP literature as postulated by McAdams, 1989) argues that high performance has to be based on the fit between an 's strategy, structure, technology, culture, management processes, and individual skills and roles, as illustrated by the MIT 90s model shown in figure 3.1,

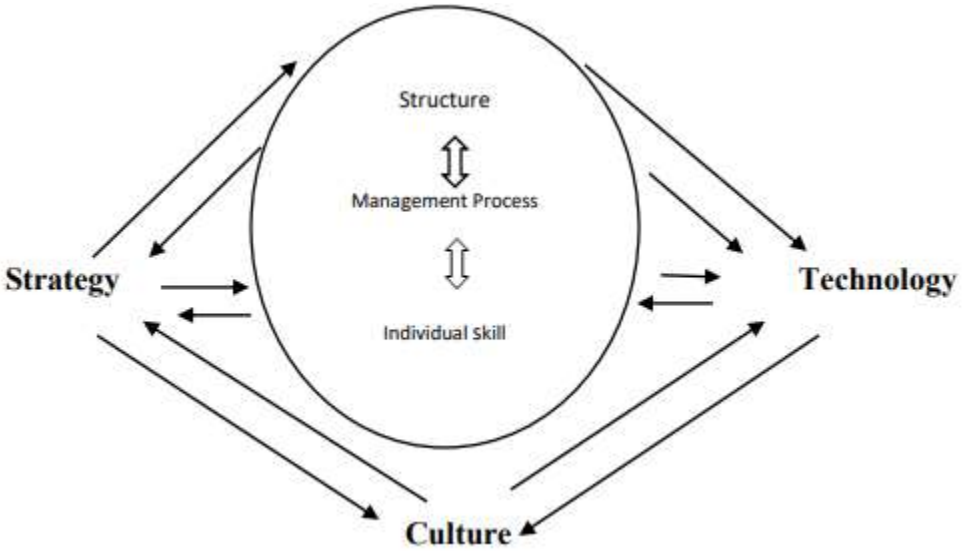

Figure 2.16: MIT9OS FRAMEWORK, SCOTT MORTON (1991)

This model that was developed at Michigan Institute of technology in The United States of America, put technology as the beginning point and stand-alone enablers. Also, structure and individual roles play a part but with minimal changes and less interaction with the other enablers. This theory works with some companies especially in bringing change to Human resource departments because it improves employee motivation and work culture as was the effect at IBM in New York. The belief is that; motivated staffs are a productive individual.

2.24.7 Conventional Model of Strategic Dynamics

The second model is the conventional model introduced by Yetton, Powell, & Levy (2002). This theory points out that, most applications of this model assume that the first step is to determine the strategy while the idea of fit and a framework such as the above is static and there is no implication of any sequencing.

The second step is to fit the structure to this strategy and then to align the management processes, technology and individual skills to that structure (figure *2.17)*

Below in figure 2.17 Is a description of occurs in an instance where BRP is created and change is initiated.

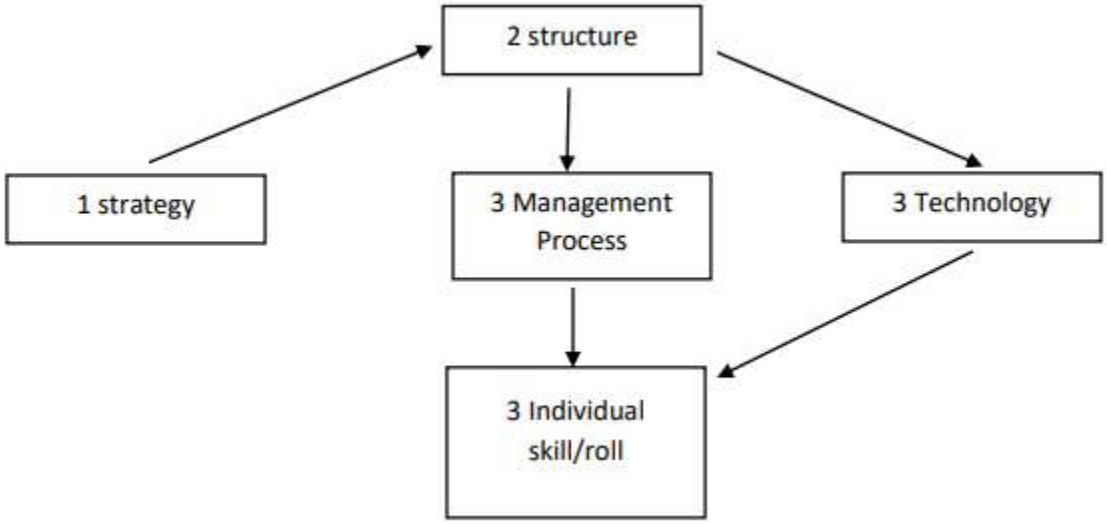

Figure 2.17 CONVENTIONAL MODEL OF STRATEGIC DYNAMICS, YETTON, POWEL AND LEVY (2002)

This model has been used by the Ford Motor Corporation from 2000 to-date, McAdam, 2018)

2.24.8 Emergent strategy model

The third model was developed by Earie and Johnson (2000). They criticized the business process that re-engineering operationalized in big Technology companies and suggested a reconfiguration of the MIT9Os model placing the technology at the center. They pointed out that technology performs two roles: the first as a determinant of the new strategy and the second as an element to be aligned with the new strategy-structure model. As figure 3.3 shows, the BRP literature focuses on the relationship between strategy, technology and structure (the top triangle), suggesting a top-down approach - a radical approach based on

strategic planning. In contrast to the BRP literature, BRP activity involves technology, management processes and individual skills and roles (the bottom triangle) and requires an incremental approach.

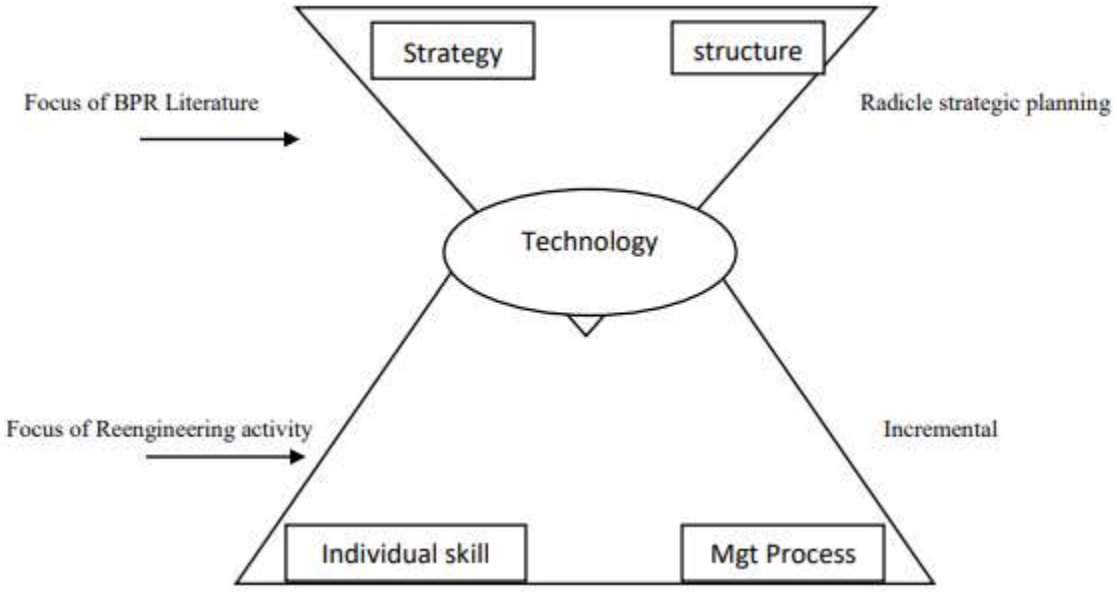

Figure 2.18 DIFFERENT FOCUSES OF BRP LITERATURE AND BRP ACTIVITY, EARIE AND JOHANSSON (2000)

Technology is represented as the link between the two triangles, however, it is clear that this model is a dichotomy, which keeps apart the top and bottom triangles confirming that there is a difference between BRP literature and the real activity of BRP. As a result, the alternative theoretical context for BRP developed by Yetton, Powell, & Levy(2002) focuses on the bottom triangle because BRP fundamentally involves the AL learning of new ways of operating. The resultant changes of the nature of BRP cannot be designed by experts or managers and implemented immediately by means of a new structure or strategy.

These changes require new skills and roles for individuals, new management processes, and new forms of AL culture and information technology activities. The nature of such change requires an incremental and gradual approach because issues such as individual capabilities and an organization's ability to evaluate performance and learn are involved. This approach does not support the opinion that the top and bottom triangle are mutually

exclusive. Theorists of strategy development and implementation have shown that strategy formation is an emergent process involving small steps and on-going changes based on the evaluation of the existing situation (Prahalad & Hamel, 2016). As a result, the strategy does not determine the structure and the other elements of the model; rather the whole configuration evolves together.

The static models can, therefore, not continue to exist in the current dynamic and competitive environment and as a result companies should accelerate AL learning to outpace competitors in building new advantages and to become or remain competitive (Prahalad & Hamel, 2016). According to Freeman & Soete, (2017), a theory of AL learning and incremental change is a requirement of these models of emergent strategy. Effective AL learning and strategy development requires goals and feedback, which are the main elements of the evaluation and more specifically of the evaluation culture.

The current study was based on the Emergent strategy as it not only recognizes the importance of Technology in BRP, it also emphasizes the fact that AL learning and incremental change is a co-requirement and continues process in the implementation of the BRP projects.

For radical redesign BRP is now a known change management approach and improvement of business process. Companies are encouraged to do things differently so as to enable that overall quality is achieved. Therefore, the adopted conceptual framework in this study is based on functional boundaries and business processes for profitable business. According to O'Neil & Sohal (1999), management has a responsibility to take a step further, rethink, and inquire that the activities of the business are important for business processes. BRP is known to consist of four elements that need to be considered and these are strategies, processes, technology and humans where strategies and processes are building the ground to enable utilization of technologies and the redesign of the human activity system.

2.26 Conceptual Framework

The conceptual framework for the study is shown in Figure 2.5 where BRP form the independent variable and firm performance forms the dependent variables. Factors such as

top management support, resource availability, stakeholder involvement, organizational culture and IT infrastructure form the control variables. The conceptual framework was developed basing on research objectives, theoretical models (RBV, institutional theory and 8-S framework) and empirical studies such as (Asikhia & Awolusi, 2015) (Awolusi & Atiku, 2019).

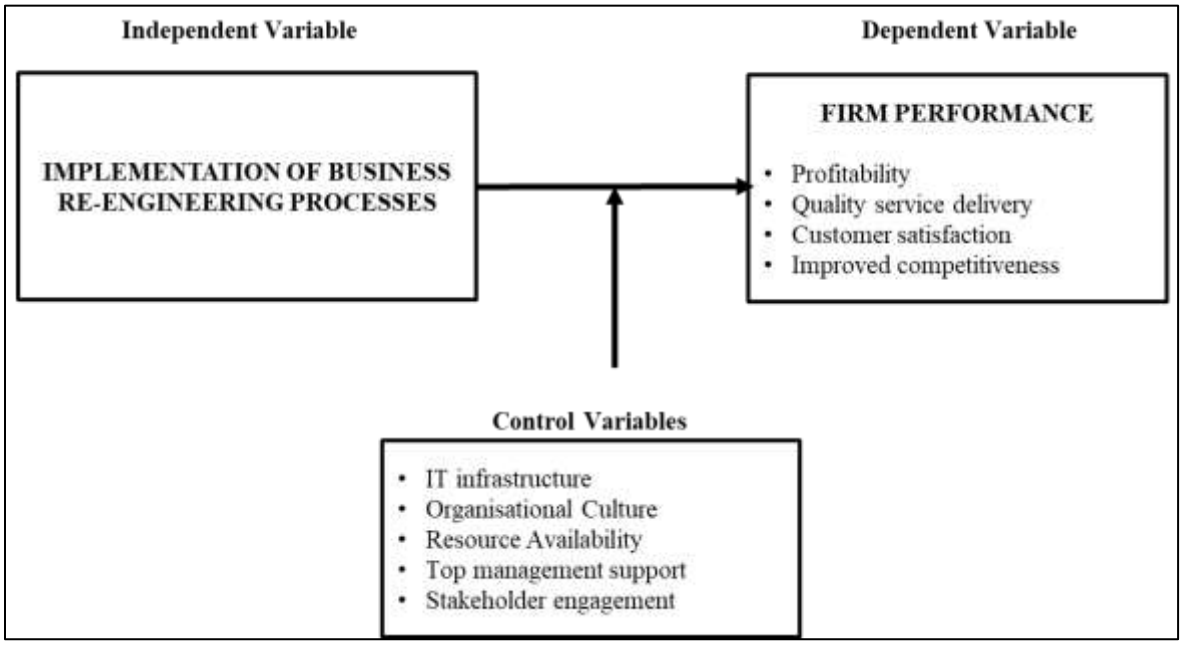

Figure 2.5: Conceptual Framework, Source: Researcher (2022)

2.27 Chapter summary.

This chapter reviewed literature according to the research questions as follows: How does BRP impact firm performance? What effects does technology have on the implementation of Business Re-engineering process? How have the individual skills by members of staff affected the implementation of the Business Re-engineering process? What Challenges does an organization have in the implementation of Business Re-engineering process? What are the options to handle the challenges and issues identified so as to take advantage of the prospects arising from the implementation of BRP? The chapter then outlined the conceptual and synthesis literature, conceptual and theoretical framework before giving the chapter summary.

CHAPTER THREE: RESEARCH METHODOLGY

3.0 Introduction

This chapter outlines and explains the methodology employed in this research. The research was conducted in order to review the business re-engineering processes and the effects it has had on company's performance at TAZAMA Pipelines Limited. In particular, the chapter discusses the following: Research philosophy and setting, methodological choice, research design and strategy, research approach, sample and sampling techniques, data collection methods and techniques, data collection procedure, data analysis, ethical considerations including reliability and validity.

3.1 Research Philosophy

Researcher's thoughts guided the philosophy within the system for which new, reliable knowledge about the research was obtained. The basis of the research, in other words, which also involved data collection, the choice of research strategy and formulation of the problem, including processing and analysis of data (Lynch, 2016). Research paradigms are frameworks that provide a foundation for conducting research and shape the underlying values and assumptions of a study. Research philosophies serve as a framework for understanding the nature of research, its purpose, and the methods used to gather and interpret data (Bhaskar & Singh, 2014) there are three main research philosophies: positivism, interpretivist, and pragmatism Crotty, 2015).

This study adopted a pragmatic research philosophy because it is very useful in aiding problem solving (Wierman, 2013) . Researchers who adopt the philosophy of pragmatism contribute to both an immediate problematic situation and the practical concerns of people which lead to the importance of research practical findings. As such, this researcher opted to use analysis procedures to support subsequent action and a variety of data collection techniques. According to (Wierman, 2013) research is said to be pragmatic in nature when the researchers desire to conduct a study is for very specific applications and not for discovery of knowledge alone. Pragmatic research may take the form of applied research or participatory action research and has dual purposes including that of conducive actions

taken in a local practice and the scientific body of knowledge. Through joint collaboration and within a mutually acceptable ethical frame work, the objectives of the society of social science contributes to both the practical concerns of people in an immediate problematic situation and to the ethical goals (Rapaport, 2009). This contributions to scientific body of knowledge and includes the conjoined goalmouths of practical problem solving and which been selected in this study. The pragmatism research philosophy was the most suitable paradigm for the study as it permitted use of both quantitative and qualitative research methods such as survey questionnaires and key informant interviews.

3.2.3 Research Setting

The setting for this study was a branch of TAZAMA Pipelines Limited in Ndola from four selected departments comprising of top management with different professional staff. The physical, social, or experimental context within which research is conducted is also known as research setting (Mungenda & Mungenda, 2013).In this research it was critical to accurately set the results and interpret them according to the departments.

3.3 Research Approach

This study used a mixed methods research approach with more emphasis on qualitative rather than quantitative aspects. Research question(s) are used in order to answer elements of quantitative research and qualitative research in a mixed methods research (Tashakkori & Johnson, 2020). Mixed methods can help one gain a more complete picture than a standalone quantitative or qualitative study and it actually integrates benefits of both methods (Creswell, 2017). There are three basic mixed method designs that integrates the study design level through exploratory sequential, explanatory sequential, and convergent which occurs and through four advanced frameworks multistage, intervention, case study, and participatory (Dawadi, Shrestha, & Giri, 2021). This study obtained the two data sets analyzed separately and specifically using the convergent design where quantitative and qualitative data were concurrently attained. The two data sets were analyzed and interpreted by merging the results (Cunnington, Menter, & Chris, 2017).

In this study the mixed-method approach permitted the researcher to employ qualitative and quantitative research methods to gain in-depth information to achieve the objectives of the study. More so, the mixed method research allowed the researcher to triangulate findings by using multiple data sources. By collecting both qualitative and quantitative data, the researcher cross-validated results thereby enhancing credibility and reliability of their findings. While quantitative methods were excellent at identifying correlations between BRP and firm performance of TPL, they failed to explain why the relationships exist. However, qualitative methods helped to uncover the underlying reasons behind the correlations by providing rich contextual information and capturing participants' perspectives regarding BRP and firm performance.

The advantage of using a mixed method research methodology in the broader spectrum is that it provides a better understand of complex research problems. In different contexts the research could be done through either quantitative or qualitative. Further, (Dawadi, Shrestha, & Giri(2021) By creating a more targeted instrument according to the research context and study environment. This is in addition to providing a better focus than doing it separately by developing a more specific according to the research context. Finally, observations produce more varied data as observed by, the multiplicity of diverse sources and types of data, contexts or environments and analyses considered.

3.4 Methodological Choice - Types of research

In order to gather relevant data for a particular research study Mungenda & Mungenda(2013) suggests several types of research studies that can be used with each design to answer different kinds of questions. These studies include correlational studies between two or more variables, that looks for a relationship or things that naturally occur in the same environment. However, it is difficult for correlational studies to express anything about cause and effect, only that there is a relationship between two or additional things. There are also longitudinal studies to show how people develop over time and how that can provide factual information. There is usually cohort across time and types of studies that follow one group of people who are referred to as, measuring the same behavior multiple times. Others to mention are clinical trial studies and experimental studies

including the case study approach, which was employed in this research. The case study is explained in detail later in the chapter.

3.5 Research Design and Strategy

A research design is a collection of techniques and procedures used in evaluating and examining measurements of the variables itemized in the research topic (McCombes, 2019). Research design serves as a road map for achieving research goals and responding to research questions. It guarantees the study relevance to the issue and cost-effective methods. A research design consists of the kind of instruments to be employed, how data will to be collected, how data analysis collection would be and what instruments will be used (Mellenberg, 2008). This study employed the descriptive survey research design in conjunction with the case study research strategy where TPL was the case study.

According to Orodho, (2005) descriptive survey is a method of collecting information, and administering questionnaires or interviewing a sample of individuals. In this study, the descriptive survey design was chosen as the researcher sought to get the precise information by applying research instruments such as questionnaires and interviews to managers and heads of departments. A descriptive study attempts to set aside biases and preconceived assumptions about human experiences, feelings, and responses to a particular situation, event or condition (Creswell, 2018). This allowed for the collection of data from a large number of respondents using survey questionnaires and interviews.

The main topic of interest and goal line of this research approach is to enable the researcher to explore the depth, richness and complexity inherent in the phenomenon and gain insights. A case study can be defined as a contemporary phenomenon of an empirical investigation of a particular real-life context using multiple methods of data collection (Yin, 2009). A descriptive case study looks at a single subject or a single case such as an organizational change process. Case studies provide a comprehensive account of what is occurring and are typically used in research that defines the development of an individual, group, or situation over a period of time in order to be within its real-life context.

The definition of a case study design was suitable for this study because the research aimed at obtaining a clear picture of the problem from various angles and perspectives using various methods of data collection. The advantage of a case study is that it allows the researcher to gather a lot of information about one person or one case. Its merit lies in its ability to provide in-depth assessment of a particular case(s) under investigation. A major disadvantage of a case study is that the information gathered about one person; organization or a small group of people cannot readily be applied or generalized to other people and cases in other situations. Therefore, a case study may be of limited use.

3.6 Time Horizon

The time horizon completion frame refers to the time intended within which the project is devoted for (Bryman & Bell, 2007). In certain instances, some research question in a longitudinal study cases, requires the researcher to study people or phenomena at more than one point in time in order to answer the questions. On the other hand, in order to respond to a research question perhaps over a period of days or weeks or months the study can be undertaken in which data is gathered at once such studies are called cross-sectional or one-shot (Saunders, 2019). Precisely, the cross-sectional time horizon was employed.

3.7 Study population

Population of study discusses things of interest or events in the entire group of people, that the researcher desires to investigate and that is also described as the population to which the findings of the study are generalized and members should have similar characteristics (Kothari, 2004). The study consisted of a target population of two hundred sixty-six (266) employees working in the Operations, Engineering, Finance and Information Technology departments for TAZAMA Pipelines Limited in Zambia. The study population was distribution as shown in Table 3.1.

Table 3.1: Target Population for the study

Department	**Population size**
Operations department	92
Engineering department	55
Finance department	60
Information Technology department	59
Total	**266**

3.8 Sample Size

A sample is usually selected from a larger population and a smaller data set of the researcher chooses to use a pre-defined selection method. These fundamentals are known as observations, sample points and sampling units. For some studies, regardless of how small the population may be, can warrant the inclusion of all matters in the study but may entail a large population which cannot all be studied (Creswell, 2018).

In statistics, the sample size of a sample is usually denoted as a positive integer /natural number and the number of observations that make up it (Blanchard & Olivier, 2019). Statistical analysis is easier with large samples than with small samples and usually those big sample sizes of 30 or more, is usually more reliable describing the statistics samples. To derive the ideal sample size for the study, the Yamane's (1973) sample size determination formula was employed:

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

In the given formula, N, n, and e denote the population size, sample size, and error margin, respectively. Based on a confidence interval of 95% and an error margin of 5%, the

estimated representative sample size for this research project was determined to be 156, considering a total target population size of 266.

$$n = \frac{N}{1 + Ne^2} = \frac{266}{1 + 266(0.05)^2} = 159.75 \approx 156 \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (2)$$

From this sample size 156, 30 individuals holding managerial positions and with experience in strategy implementation such as BRP were purposively selected for the key informant interviews whilst the remaining 126 were randomly selected for the survey. According to Creswell (2012), determinant of sample sizes in qualitative studies can result in factors such as saturation, experience and rank of respondents, as well as age. Many other researchers have suggested different theories suggesting what constitutes a sufficient sample size (in contrast to quantitative studies). However, some clearly find this frustrating in that a clear distinction is often very difficult to make regarding what is subjective and what is not (Creswell, 2018). In qualitative research, (Cunnington, Menter, & Chris, 2017), suggest that although the idea of saturation is helpful at the conceptual level, it provides little practical guidance for estimating sample sizes for robust research prior to data collection. Whilst Morse(1994) leans towards thirty to fifty (30-50) respondents; (Benard, 2000) states that most qualitative studies are based on samples between thirty to sixty (30-60) interviews for ethnos science and Grounded theory methodology while Creswell & Creswell,(2018) suggests between 20-30 respondents so as to avoid saturation. Therefore, on the basis of the aforementioned guidelines and given the fact that this study is descriptive, the sample size purposively selected thirty (30) respondents, fifteen (15) from operations, (8) from top administrations and 7 middle managers as shown in Table 3.2 below.

Table 3.2 Department and number of Respondents selected for qualitative research

	Operational Level	**Top Administrators**	**Middle Management**	**Total**
Number of respondents	**17**	**4**	**9**	**30**

The distributions of the sample size for the quantitative and qualitative researches are shown in Table 3.3 where the proportionate stratification method was employed to determine the total sample sizes for each department (stratum) for instance (54 for Operations department was calculated by dividing 92 by 266 then multiplying by 156).

Table 3.3: Sampling frame for the study

Department	**Population size**	**Sample Size**		
		Total	**Qualitative**	**Quantitative**
Operations department	92	54	7	47
Engineering department	55	32	11	21
Finance department	60	35	5	30
Information Technology department	59	35	7	28
Total	**266**	**156**	**30**	**126**
Sampling method			Purposive sampling	Stratified random

3.9 Sampling Techniques and procedures

The study employed both stratified random sampling and purposive sampling techniques for the quantitative survey and qualitative researches respectively.

3.9.1 Purposive sampling

This study employed purposive sampling which is also known as judgmental, selective, or subjective sampling, a type of non-probability sampling in which researchers rely on their own assessment to participate in their surveys. The researcher in this case picked participants from departments holding managerial positions and experienced in BRP implementation regardless of the qualifications and the other participants from other

departments had specialized characteristics. It is used most often when it is difficult-to-reach population that needs to be measured. Purposive sampling enabled the researcher to gather a lot of information out of the data that was collected.

Purposive sampling allowed the researcher to describe the major impact that the findings had on the population. The key advantage of using purposive sampling was cheapness, efficiency, and simple implementation (Patton, 2018). Purposive sampling procedures that can be applied to such quantitative study design in that the researcher carefully selected participants based on the study's purpose ensuring that each participant provides valuable information which is one of its main advantages. Another major benefit of purposive sampling is the wide range of sampling techniques that can be used across such qualitative research designs; purposive sampling techniques range from homogeneous sampling through to critical case sampling, expert sampling, and more. One disadvantage is that the population may not be representative of the entire population.

3.9.2 Stratified Random Sampling

The study also employed the stratified random sampling technique to select 126 participants for the survey. The study employed a stratified random sample approach, with the four Operations, Engineering, and Finance and Information Technology departments for TPL serving as the strata of interest. Consequently, participants were chosen randomly from each stratum. The utilization of this sampling strategy ensured that all the four departments were represented in the study in a proportional manner, hence mitigating the potential for sampling bias. The stratified random sampling method was deemed the most appropriate sampling technique for this study due to the varied nature of the population, which comprises individuals from various organizations. This sampling technique permitted generalizations of findings.

3.10 Data Collection Methods and Techniques

Both primary and secondary data were used in this study.

3.10.1 Secondary data

Martins, Cunha, & Serra,(2018) Define Secondary data as data that has been already collected and is readily available from other sources Desk review refers to secondary data or that which can be collected without fieldwork. It is published reports and statistics, which are certainly important sources. In the context of this study, data collection was widened to include all sources of information that do not involve a field survey. This included searching libraries, the internet, and company information. Desk review is very effective and can be conducted even across borders for multinationals. It is quick and cheap, and most of the basic information can easily be fetched, which can be used as a benchmark in the research process. A desk review was conducted to collect data from various departments within TPL. This included reports and project documents from the Zambian offices of TPL.

Secondary data was collected from all documents on site and through the internet on company websites, and reports regarding BRP and the change process as planned in the Strategic plan. The manual reports and a few management documents from the companies were also considered secondary material for desk review. For best practice in BRP credible journal, books, various articles, newsletter, newspapers websites and other sources were taken into consideration including a comparative look at similar change process theories. Additional information acquired from current working papers, processes reports, statistical data and regulations of standard work were further taken into consideration. This data informed the study firstly by providing the historical aspect of TPL operations and secondly any available post BRP performance information.

3.10.2 Primary data

Primary data is a type of data that is collected by researchers directly from main sources through interviews, questionnaires, surveys, experiments (Creswell 2018). In this study

data was collected using interviews, observations and questionnaires. Because of multiple sources of data, triangulation was done and it involved the use of interviews, observations and questionnaires. The questionnaires included quantitative (close-ended) or qualitative questions (open-ended). As mentioned earlier the collection method used in collecting primary data was a questionnaire with open ended questions as well as interviews of key respondents, and observations.

Data was collected using a questionnaire with close-ended and open-ended questions as well as interviews of key respondents. Two types of data were collected and these were qualitative and quantitative data. Quantitative data collected comprised of close-ended information such as those found to measure attitudes and performance instruments including rating scales, behaviors of observation checklists. The analysis of this type of data consists of statistically analyzing scores collected on instruments such as, questionnaires or checklists to answer research questions or to test hypotheses. Quantitative data was collected from both operations and finance department and such an activity underscores the importance of the selection of the mixed approach as earlier stated. Qualitative data was gathered using interviews, observations and review of documents such as the TPL's IT Strategic Plan.

3.11. Data Collection Instruments

Kabir, (2016) defines data collection (research) as an instrument in data gathering that measures, observes or records quantitative or qualitative data. These data collection tools instruments are collected using both primary and secondary information. Primary data on the other hand, is the data gathered during study from the field and for the first time, and thus is original in nature while secondary data, on the other hand, is that which has already been gathered by someone else and has already passed through the statistical thematic process (Kothari, 2004). Four research instruments were used to collect both quantitative and qualitative data for this study: interview schedule, structured questionnaires, analysis of documentary reviews and observation checklist.

3.11.1. Questionnaire

Primary data was collected by the researcher through administering open ended and closed questions. Saunders (2019), defined questionnaires as tools that are typically adopted to collect data. Additionally, descriptive research with a quantitative design frequently uses questionnaires. Questionnaires may be open or close ended. Respondents usually provide written explanations as a way of describing or listing responses to open ended questionnaires. In order for the researcher to assemble unbiased information focusing on the research questions during this study, both closed and open-ended questionnaires were appropriate. However, before the use for actual collection of data pre-testing of the questionnaires was steered from a sample of the population.

This study adopted self-administered questionnaires, with close-ended and open-ended questions that were administered to 126 individuals from the four departments of TPL to answer and give their opinions accordingly**.** The benefits of using a questionnaire are as outlined below (Creswell & Creswell, 2018):

Saves Time for the Researchers - when trying to collect primary data, the questionnaire technique saves the most time. This is because, unlike what happens when conducting surveys, the researcher in this case does not need to physically interview respondents face to face.

Less expenditure - Very little funds are required to collect data via questionnaire during research. This is the case unless the researcher is using postal services, to send the questionnaire which would then require postal fees.

Pe**rsonal Bias -** it has been observed that during times of oral interviews, the respondents might sometimes be somewhat led to answer according to the personal bias of the investigator. When respondents fill out the answers on their own and send questionnaires, the element of personal bias is completely eliminated. Hence such answers will be more authentic and accurate.

3.11.2. Interviews

In order to obtain qualitative data for the study, semi-structured interviews were used, in which the researcher asked informants a series of predetermined but open-ended questions (Guest, Bunce, & Johnson, 2006). A structured interview is when the interviewer has a list of questions written down on paper and the data collection process involves asking those questions exactly as prepared and recording the responses given.(Pandey & Pandey2015) . Qualitative data can be gathered using the method of interviewing. Useful information related to the study was obtained through the researcher using this instrument. Interviews also allow other questions to be raised out of the structured one in the process which in turn will not leave any question relating to the study unanswered hence meeting the objectives of the study. It is important to design a systematic interview method as well as carefully analyze and validate interview data. Although it may be less formal than some quantitative methodology's, his approach will enhance collection of more suitable information about people's understanding of the subject under study. Open ended questions were used to collect necessary qualitative information from key respondents. Particularly, the key respondents from TPL management were conveniently selected for the interviews due to their expertise and having hands on operational systems. The idea was to collect strategic level insights in to the BRP implementation exercise. Outlined by Gay, Mills, & Airasian, (2006) are some of the benefits of the structured interviews:

Benefits of using the Interview- The interview guide was preferred because as Gay, Mills, & Airasian, (2006) puts it, it allows the researcher to make suggestions and gives respondents freedom to express their views or opinions.

Accurate screening - Accurate screening generally assists with face-to-face interviews. The individual being interviewed often provides factual information during screening and asks questions such as race, gender and age. It is possible to get around screening questions in online and mobile surveys.

Capture verbal and non-verbal questions. - The interviewee focuses on track to accomplishments and also captures verbal and non-verbal questions including body language during face-to-face interview which can specify a level of distress with certain

questions. For the issues being discussed in the interview it can also adversely, indicate a level of eagerness.

Keep focus - The interviewer is the one that has control over the interview. Online and mobile surveys are often completed during time convenient for the respondent, but are often in the midst of other distractions such as texting, reading and answering emails, video streaming, web surfing, social sharing, and more. Face-to-face interviews are in-the-moment, free from technological distractions.

Capture emotions and behaviours. Online and mobile surveys are frequently completed at a time convenient for the respondent and cannot capture raw reactions and behaviour similar to not being able to capture verbal and non-verbal questions (Gay, Mills, & Airasian, 2006)

3.11.3 Observations

This is where a researcher observes the behavior of a group or individuals in order to witness first hand social behavior of research methods. In this study the researcher developed an observation schedule of time to observe individuals which was non participant where the observer was detached from the actions of the group (Kumar & Tyagi, 2014). In this regard, the researcher was a research instrument for data collection through observations.

Benefits of observations are that the researcher gets acquainted with the observed and helps to form a hypothesis on them. It also allows the researcher to directly see what people do rather than say and helps document activities, behavior and physical aspects of situations without having to depend on people as was the case in this instant.

3.12 Validity and Reliability

3.12.1 Validity

Kombo and Tromp (2006) define validity as a key component of how effective a test measures what it is intended to assess. In other words, the analysis of the data actually represents validity and the degree to which outcomes are obtained from the phenomena

under study. Kombo and Tromp (2006) state that validity of research can be explained as an extent to which requirements of scientific research method have been followed during the process of generating research findings. Oliver (2010) considers validity to be a compulsory requirement for all types of studies. There are different forms of research validity and main ones are specified by Cohen, Manion, & Morrison, (2017) as content validity, criterion-related validity, construct validity, internal validity, external validity, and concurrent validity and face validity. The utilization of methodological triangulation, which involves the integration of both quantitative and qualitative data, contributed to the enhancement of validity in this study. The Kaiser-Meyer-Olkin (KMO) test was employed in order to assess the validity of the questionnaire from a statistical perspective. The results are summarized in Table 3.4.

Table 3.4: KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.771
Bartlett's Test of Sphericity	Approx. Chi-Square	2614.649
	Df	496
	Sig.	0.000

As shown in Table 3.4, for the 32 itemed questionnaire, a KMO statistic of 0.771 was estimated in SPSS. This implies that the questionnaire met the validity criterion and sampling adequacy as Alacapinar (2022) agrees with the view that a KMO value above 0.6 is considered acceptable, while values above 0.7 are considered excellent for indicating validity.

The other measures to ensure validity of this research included the following:

a) In a cross-sectional study you collect data from a population at a specific point in time and this case, it was over an 8 months period.

b) Taking into account the characteristics of the study an appropriate time method was chosen.

c) Following the postulation by Amin (2005) that a study measures the issues they are intended to validity during the sample the of instruments. The most suitable sample

method for the study was selected, since TAZAMA Pipelines Limited is a bi-national company, the fact that, there are units which are almost similar in design both in Zambia and Tanzania, the Zambian Office was selected.

d) The respondents were not pressured in any ways to select specific choices among the answer sets and the researcher ensured respondent independence.

Validity of qualitative data in this study: it helps in establishing key research points Qualitative data is as significant as quantitative data in establishing key research points. However, since it cannot be quantified, the question of its correctness is critical.

The main factors that must be considered to ensure that the research philosophies are consistent with the research. To maintain the validity of the research, there is a need to understand the underlying needs of the research, the overarching process guidelines and the societal rules of ethical research (Hasan & Andaleeb, 2016).

One of the major techniques that were used for establishing the validity of qualitative data in this study included choosing a skilled moderator. Employing a moderator to review the research instrument helped overcome personal bias and ensured that the data collected was genuine and was not influenced by what the researcher wanted to see or hear. Another measure was data blinding and of the individual respondents by administering the research instruments to the respondents in different departments at different times of the month so that they do not share information. Using this method restricted the amount of information shared between the respondents to make sure that the research was not biased with preconceived notions of the respondents.

Another way to promote the validity of this research was by employing the strategy of triangulation. This basically was the use of multiple individuals who analyzed the same data. So as to have different perspectives to the problem at hand. Lastly, to completely ensure validity of the qualitative research, this researcher used a technique known as respondent validation. This principally involved having the initial results tested with the participants in order to understand if the results still come out true.

In proving the accurateness of the qualitative research, the researcher created phases to facilitate the validity of the gained results. Table 3.5 shows some of the techniques employed to ensure validity and reliability in the study.

Table 3.5: Techniques Used in establishing validity and reliability of this research

VALIDITY	**RELIABILITY**
Employing a moderator	Triangulation
Triangulation	Reputational analysis
Respondent validation	Maintaining data
Pilot testing instruments	Pilot testing instruments

The procedure from inception was that while creating validity and reliability, it was very important that the researcher uses the tools and techniques before conducting the actual research. This helped to establish the parameters for finding trustworthy and legitimate results right away and did not affect the research's results final findings.

Further, for an effective assessment of the literature to be done, there was need to understand how the processes would conduct efficient reliability and validity measures.

In order to add another level of legitimacy to the research and corroborate the study purpose, reliability and validity methods were carried out in tandem with the research processes.

3.12.2 Reliability of the data

When a test is applied in certain circumstances by a number of different researchers under stable conditions, consistent results are produced. Reliability demonstrates consistency and applicability over time. Same conditions should yield same results with the same methods used by different researchers at different times. The present study employed the Cronbach's alpha statistic to assess the reliability of the research instruments, specifically examining their internal consistency. The researchers employed a threshold value of 0.7 in order to assess the reliability of the questionnaire. The administration of pilot tests for the

questionnaires contributed to an improvement in the reliability of the instrument. In order to establish reliability for qualitative data, the researchers implemented a strategy of verifying transferability. This involved providing a comprehensive account of the research process, known as a rich description, which would enable future researchers to replicate the study in different settings. The results of the Cronbach's test are presented in Table 3.5.

Table 3.5: Reliability Statistics

Construct	Cronbach's Alpha	N of Items
BRP Implementation at TPL	0.726	11
Firm Performance	0.782	10
Factors influencing BRP implementation	0.847	11
Overall	**0.709**	**32**

The findings shown in Table 3.5 indicate that the survey questionnaire's constructs exhibited Cronbach's statistics ranging from 0.726 to 0.847, while the total questionnaire with 32 items demonstrated a Cronbach's index of 0.709. These statistics indicate that reliability of the questionnaire was attained. According to Bryman and Bell (2020), a minimum Cronbach's Alpha coefficient of at least 0.7 is an indicator of questionnaire reliability.

Furthermore, the more measurement errors occur the less reliable the test, hence reliability is seen as the degree to which a test is free from measurement errors, (Habib & Shah, 2013). In the same way, Sidhu (2003) under the same conditions the same results if administered to the same children would yield the same test results and makes assessments very reliable. The more errors found in an assessment the greater its unreliability, and vice versa which contributes to validity and makes reliability a very important factor in assessment.

Dependability refers to how consistently and predictability a measurement of a phenomenon provides findings and concerned with repeatability (Habib & Shah, 2013). For example, the researcher was consistent across the process and testing was seen to be reliable with repeated measurements made under constant conditions. It was viewed as the most appropriate measure of reliability when making use of Likert scales (Robbins & Judge, 2018).

According to Straub, Boudreau, & Gefen(2004)) dependability in qualitative research includes very diverse paradigms, where the aspect itself is epistemologically counter-intuitive along with having a very difficult definition (Russell, 2014). Thus, the researcher in this study did the following in order to establish reliability:

1. Reputational analysis,

2. Use of comprehensive data,

3. Constant testing and comparison of data,
4. Use of tables to record data,
5. Test re-test

These techniques helped the researcher validation the data sourcing, and improve the data presentation process of the research.

In terms of establishing dependability, two processes were conducted by the researcher. The first one being recording of the data in a table and provide an updated assessment of the results as displayed. The researcher had the opportunity to swiftly evaluate the results as per the record of each individual response and usage of table for data collection.

Data triangulation was also used to assess reliability. The table also assisted in the concise construction of the conclusion parameters of the research. The study adopted theoretical triangulation, wherein other research works in the same arena were analyzed and presented as a literature review to support the results claims of the data collection and analysis process. Moreover, the reliability measures relating to the triangulation of data provided

an extensive understanding of the research objectives, which provided an additional layer of reliable stamping to the research.

While according to Sidhu, (2003), reliability is said to be consistency between independent measurements of the same phenomenon. The same methods used by different researchers at different times under the same conditions should yield same results. To ensure reliability, the researcher undertook a pilot study. Pretesting is the stage of research when survey items or questionnaires are tested on participants from target population or study population, to gauge the reliability instruments prior to being distributed to the entire population. Pretesting helped determine if respondents understood the questions as well as if they could perform the tasks or have the information that questions required. Pre-testing also provided the most direct evidence for not only the reliability of the tools but also the validity.

3.12.3 Trustworthiness of Data

To increase the trustworthiness of the qualitative findings various techniques were employed including member checking comparing different forms of data. Triangulation was used to increase validity and credibility of the findings.

In qualitative research, a member check, also known as informant feedback or respondent validation, is a technique used by researchers to help improve the accuracy, credibility, validity, and transferability of data (Mungenda & Mungenda, 2013). It is also known as applicability, internal validity, fittingness or trustworthiness of a study. There are many subcategories of member checks, including narrative accuracy checks, interpretive validity, descriptive validity, theoretical validity, and evaluative validity. In many member checks, the interpretation and report or a portion of it is given to members of the sample (informants) in order to check the authenticity of the work. Their comments serve as a check on the viability of the interpretation. An expert review in research methods is where an expert in the topic under study uses his or her knowledge and experience of testing the findings of the study. The expert will spot problems and recommend changes to improve on the presentation of the findings.

Ensuring trustworthiness in qualitative research is essential to establish the credibility, dependability, conformability, and transferability of the study findings. Here are some strategies that can be employed to enhance trustworthiness:

Credibility: This refers to the believability of the research findings. To enhance credibility, researchers can use techniques such as prolonged engagement (spending sufficient time with participants), triangulation (using multiple data sources or methods), member checking (validating findings with participants), and peer debriefing (seeking input and feedback from other researchers).

Dependability: Dependability relates to the consistency and stability of the research findings over time. Researchers can promote dependability by maintaining an audit trail, documenting the research process thoroughly, and using clear and well-documented data analysis procedures. This allows for potential replication and verification of the study.

Conformability: Conformability refers to the objectivity and neutrality of the research findings, indicating that they are based on the data and not influenced by the researcher's biases or preconceptions. To enhance conformability, researchers can adopt reflexivity, which involves being aware of and transparent about their own biases and positions. Peer review and researcher reflexivity can help in reducing potential bias.

Transferability: Transferability is the extent to which the findings of the research can be applicable or generalized to other contexts or settings. To enhance transferability, researchers should provide rich and detailed descriptions of the research context, participants, and data collection methods. This allows readers to assess the applicability of the findings to their own contexts.

Additionally, researchers should also consider addressing and discussing any potential limitations or challenges that may affect the trustworthiness of the research.

By employing these strategies, researchers can enhance the trustworthiness and rigor of their qualitative research, ultimately increasing the confidence in the study findings.

3.13. Data Analysis

Clearly the process indicates (Kothari, 2004) making sense of data and consolidating the data by involving what people have said and interpreting what the researcher has seen and read. According to some, it involves giving meaning to the data gathered for a certain subject. Mixed methods data analysis was done using both qualitative and quantitative which also involves the analysis of one or both data types.

Qualitative data was analyzed using thematic analysis and responses to open-ended questions was recorded and then grouped into categories or themes that emerge. The collected data was analyzed before coding the information and then transcribed into common themes. The researcher had to read recorded script multiple times with focus on recurring and consistent themes that would be identified in the participants' responses. Underling them with variously colored highlighters, every shared concept was indicated using a single-color code. Then the researcher axial-coded the data which was collected and sequential coding of the grouping into themes accordingly and presented the objectives descriptively. The quantitative data collected from questionnaires was analyzed accurately and recorded by the Statistical Package for the Social Science and Microsoft Excel.

3.14 Measurement of Variables

Data is the value you record in data sheets and is typically divided into two types. Data is a specific measurement of a variable.

a) Amounts represent quantitative data.
b) Groupings represent categorical data.

In this study variables were attributable to quantitative data and categorical data: A variable that contains categorical data is a categorical variable while a variable that contains quantitative data is a quantitative variable.

Qualitative variables like the independent variables or causal variables were measured individually to see their effect on the outcome on the dependent variable which was the success of the BRP at TPL. Each independent variable was looked at in turn and the effect

recorded. The quantitative data was measured using ratios and percentages to show in the figures that are depicted in chapter 4.

3.15 Ethical considerations

The conduct of ethical research has become essential to producing meaningful research, as such, researchers' conduct was scrutinized in a way that had never been done before with codes of conduct being regulated (Best & Kahn, 2006). Many other issues associated with professional practice and codes that could potentially arise in research were discussed, as well as others in accordance with Wiersma, (2000).

In order to effectively address ethical research considerations aspects, the researcher took the following ethical issues into consideration:

1. Participants were reminded that participation was voluntary and the respondent's rights were very important. As such respondents were informed of their freedom to withdraw from the study at any stage in the research if they so wished.

2. Respondents were requested to participate based on an educated concept. According to the principle of informed consent. The researcher provided participants with enough information and assurance for their participation by fully enabling them to understand its implications and make an informed decision about whether or not to do so, free from any pressure or coercion (Bryman & Bell, 2007).

3. The researcher ensued that aims and objectives of the research were not a misrepresentation.

4. The researcher ensued that acceptable language was used and avoided offensive, discriminatory language during the formulation of Questionnaire/Interview questions.

5. Respondents were highly encouraged to maintain privacy and anonymity.

6. All works by other authors that were used in any portion of the dissertation were acknowledged according to the tight standards of the ZCAS university research guidelines.

7. Discussions and analyses throughout the research were done with care and the highest level of objectivity.

The researcher got permission from the Managing Director of TAZAMA and had an introductory letter from ZCAS University. During data collection, the researcher explained to the participants what the study was all about. The researcher informed the participants approximately how long the interview would take. Participants were assured that there no risks was attached to their participation in in the study. Further that, if they did not want to take part in the study, they were free not to do so.

The respondents were also informed that no form of personal benefit was attached to their participation in the study. The participants were also informed that the information that was to be collected was to be used for academic purposes and would be treated as confidential.

3.16 Chapter summary

This chapter established the research settings and looked at the overall research design of the thesis, in which the research methodology was established -mixed method approach. The chapter also identified the research population, sample and sampling techniques, data collection methods and techniques employed in collecting data for this study. Further, data analysis methods were highlighted and conceptual content analysis was established as a method of analysis for this study. Finally, the chapter looked at validity and reliability before establishing the ethical considerations.

CHAPTER FOUR: DATA PRESENTATION AND ANALYSIS

4.1 Introduction

This chapter presents the outcomes of the study regarding the research inquiries based on the data obtained from the participants in relation to TAZAMA Pipelines Limited. The initial part focuses on providing background information about the participants. The following section examines the current state of BRP implementation at TAZAMA Pipelines Limited. Subsequently, the third section assesses the individual skills and competencies relevant to the implementation of Business Re-engineering at TAZAMA Pipelines Limited. Finally, the last section addresses the challenges that arise from implementing the Business Re-engineering Process at TAZAMA Pipelines Limited. The interviews involved a total of 30 members of staff at TAZAMA Pipelines Limited, achieving a response rate of 100% whilst the survey involved 111 participants, achieving a survey response rate of 88%.

4.2 Background Information of respondents

This section comprises of an analysis of the four specific objectives including the contextual details regarding the gender distribution, age range, positions held within the organization, and years of work experience among the respondents and how it affected the objectives.

4.2.1 Gender of the Respondents

Figure 4.1 displays the results pertaining to the gender distribution of the respondents. The data reveals that among the participants, males constituted a larger proportion, accounting for 64% of the administrative staff, whereas females represented 36%. The majority of the respondents were male which implies that the company is a male dominated industry. It is worth noting that despite the researcher herself being female, these statistics indicate that there was no gender bias in the data collection process.

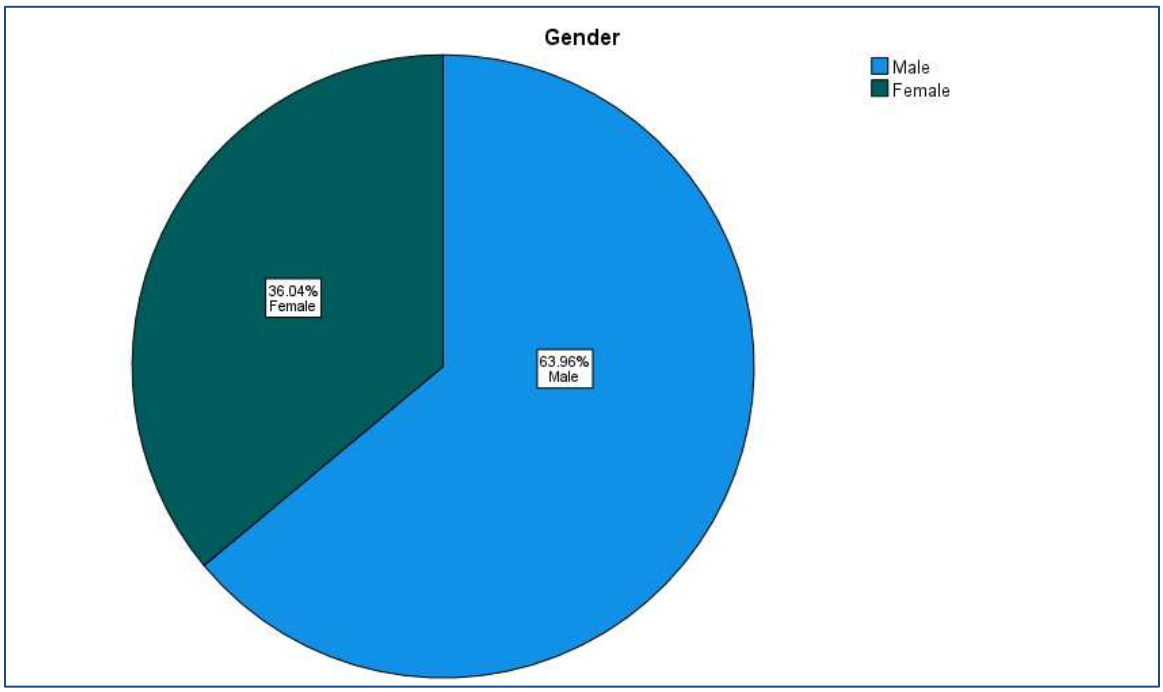

Figure 4.1: RESPONDENT'S GENDER, SOURCE (FIELD WORK, 2023)

4.2.2 Respondent's Age

Figure 4.2 provides a concise overview of the findings related to the age distribution of the respondents. The results indicate that the highest percentage, 50.45%, falls within the age group of 30 to 39 years. The next most represented age group was 40 to 49 years, accounting for 25.23% of the participants. On the other hand, both the 50 years and above age group and the 20 to 29 age group had the lowest representations, each comprising 16.22% and 8.11% of the respondents respectively. These findings suggest that a significant portion of the employees were relatively young, which implies that they may possess a better understanding of the latest trends in business process engineering.

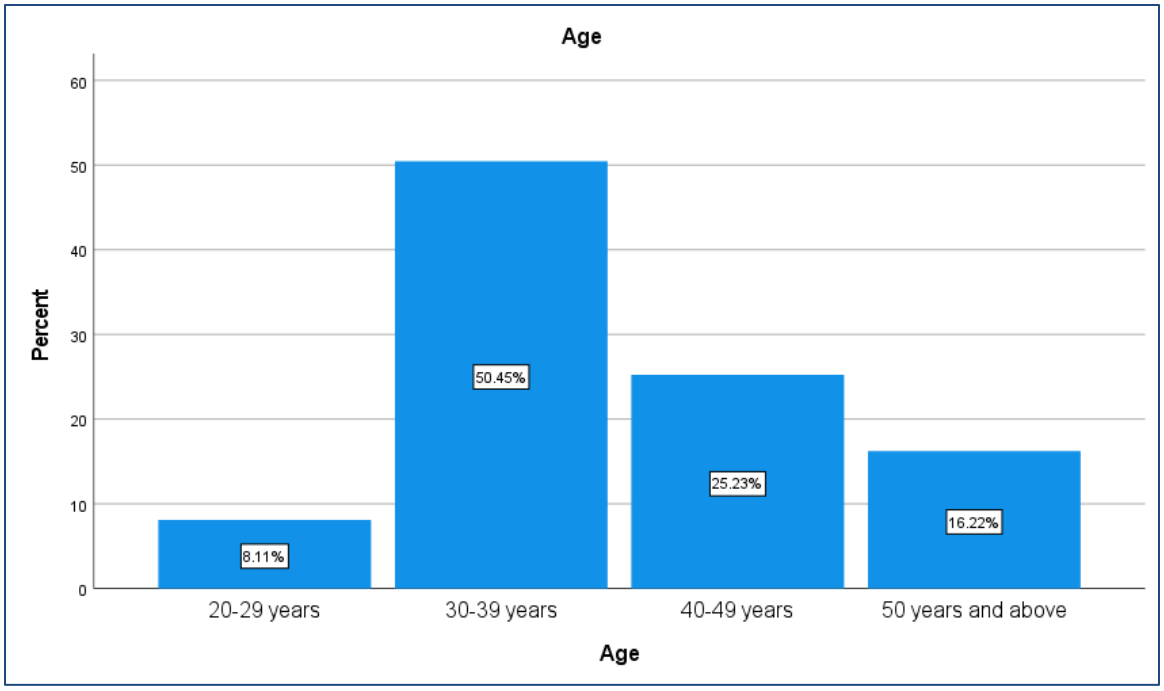

Figure 4.2: Respondent's Age

4.2.3 Respondents Education Level

Figure 4.3 displays the results concerning the educational qualifications of the respondents, which aids in assessing the available resources for Business Process Re-engineering (BRP) within the firm.

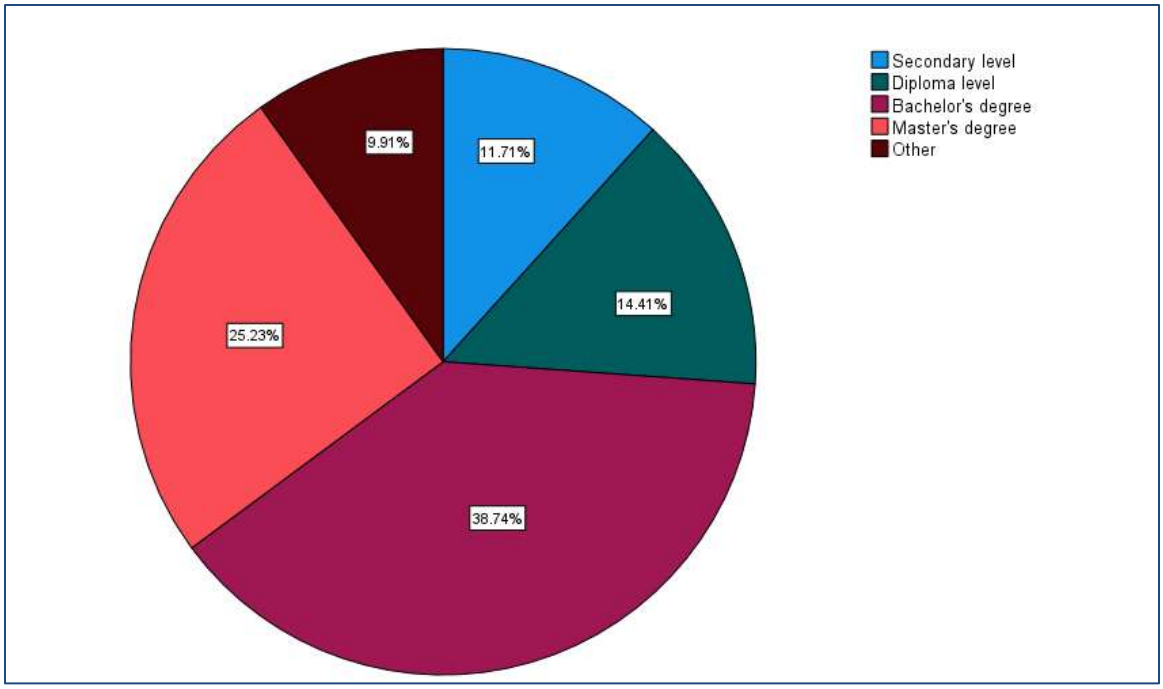

Figure 4.3: Respondent's Educational Level, Source (Field Work, 2023)

The majority of the respondents (38.74%) had a Bachelor's degree while 25.23% had Master's degrees and 11.71% had secondary education. Only a few respondents had other levels of educational qualifications such as college certificates and doctorate degrees which accounted for 9.91% of the sample.

The distribution of respondents can be attributed to the fact that the study encompassed both management and non-management employees, whose job specifications require a combination of diploma-level qualifications and at least a university degree. The findings from this study are that education is important and the respondents were sufficiently educated, enabling them to understand the survey questions and provide reliable information.

This means that one has the specialized skills or knowledge that employers such as TAZAMA are looking for. The degree is always the opening window for employment for the kind of jobs that the respondents are doing at TAZAMA. Yet a degree alone without the experience is not enough as one respondent from the Engineering department put it.

4.2.4 Respondents Department

Figure 4.4 provides a summary of the findings regarding the distribution of participants from various departments within the organization. The results reveal that the highest percentage of respondents, 41.44%, were from the operations department. Following that, 24.32% and 16.22% were from the Engineering and Finance departments respectively. The information technology department accounted for 18.02% of the participants. These findings suggest that the majority of participants, particularly those from the operations and finance departments, were likely more familiar with the concept of business process re-engineering and firm performance due to their job specifications and responsibilities within the company.

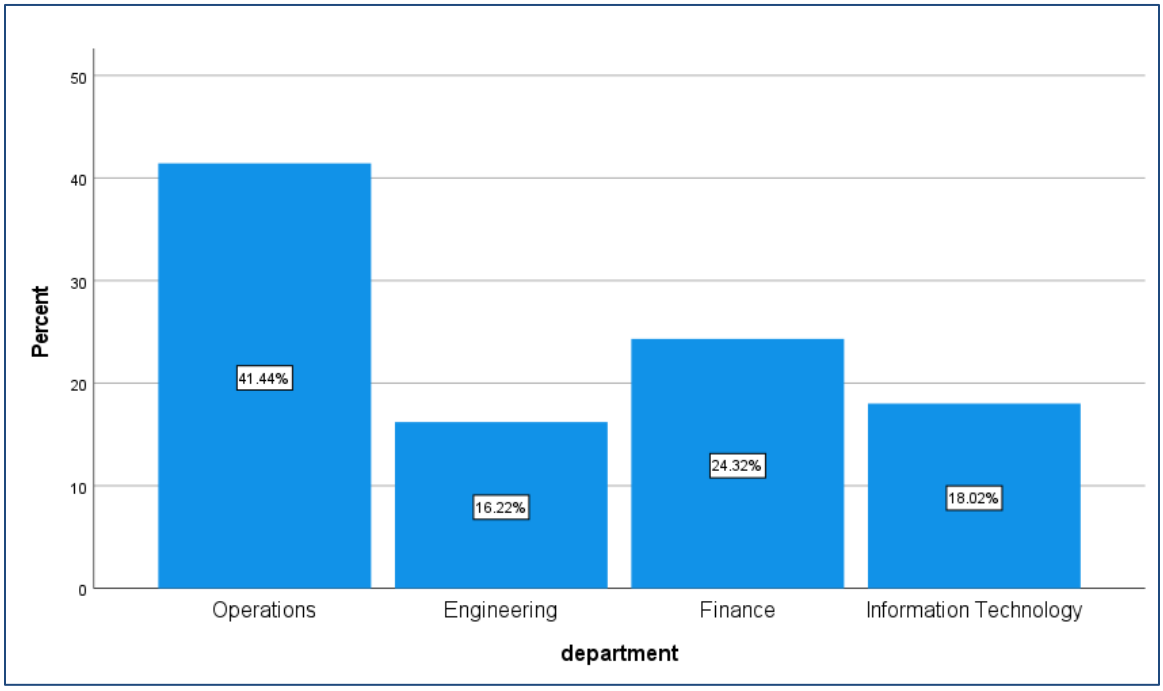

Figure 4.4: RESPONDENT'S DEPARTMENT, SOURCE (FIELD WORK, 2023)

4.2.5 Respondent's Tenure

Figure 4.5 presents a summary of the findings with regards to the number of working years. As seen, amongst the respondents, employees who had worked for over 10 years represented about 68% and 20.72% for 5 to 10 years. The minority, 11.71% had served for

3 to 5 years at TAZAMA. The majority of the respondents however, were those that had been working with the company for over 10 years and these represented 67.57%. Tenure of respondents was very critical in retaining all the facts and information acquired , longer one has been with the organization, the more they know and understand the operations of the company and the more likely they will give accurate information in a study. Work experience or tenure is important because it tells the prospective employers about what a person can contribute.

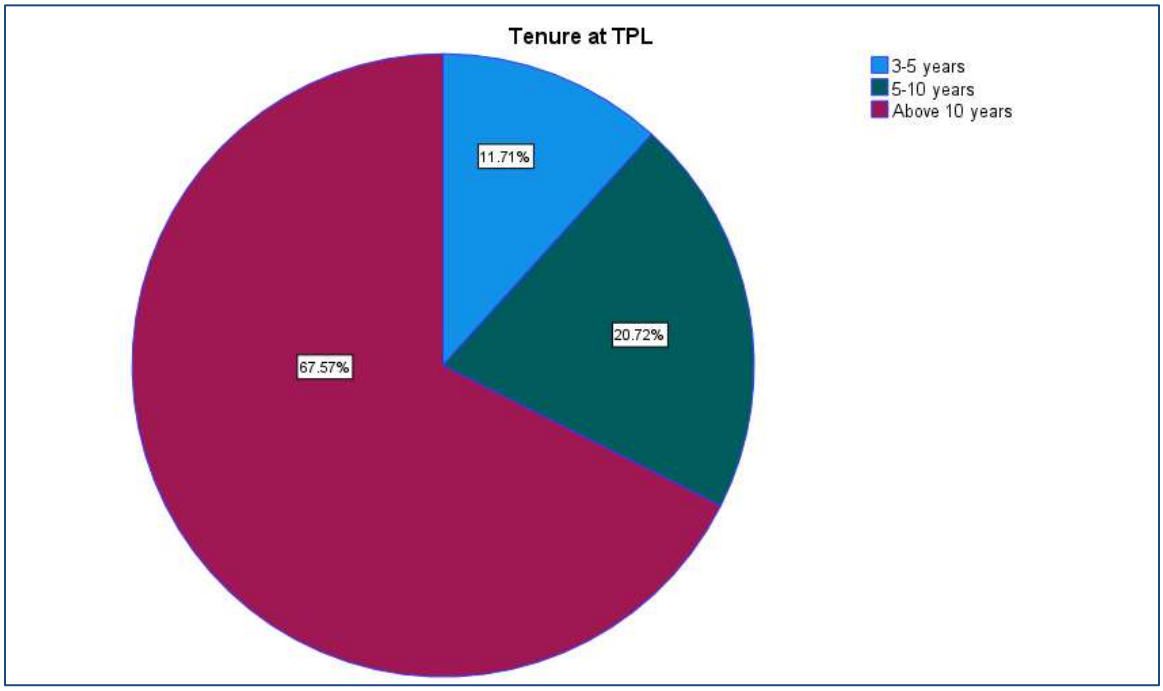

Figure 4.5: RESPONDENT'S TENURE, SOURCE (FIELD WORK, 2023)

4.3 Description of the nature and Operations of TAZAMA

In terms of operations and structure, the respondents said that TAZAMA has a functional reporting structure were departments report to as head of section and a functional directorate. With the BRP in process for three years running, this has enhanced a family culture structure that has promoted an open-door policy. The company has now streamlined its policies in line with the new mode of operations where structured manuals have been developed including those for systems and procedures. The fact that TAZAMA's Business environment is a highly regulated industry by the Energy Regulation Board there are moments where Government policy supersedes the Policy in as much as BRP would try to

establish robust systems. The Information Department has now been restructured to Support tasks across the entire organization so as to ensure work is carried out. A lot of linkages have been established between the administration department, operations and engineering departments resulting in to a seamless case.

When asked how the macro-economic environment factors have affected the implementation of BRP in their respective departments, the respondents said that the administration department directs new policy directives where the changes at National level have affected them most in that, with the finished product importation (fuel) they will now step up with security, training of staff across the in order to improve efficiency.

In as far as having individual skills for members of staff is concerned the Implementation of BRP at TAZAMA has seen almost all staff from all departments attending workshops and trainings in order to up skill. The capacity building has been in an effort to ensure that members of staff are ready and competent in the pumping of the finished product whose economics and other technical things such as pipe pressure, security and distribution have changed.

The respondents observed that virtually all departments have been affected by the implementation of BRP. With the engineering department, the information technology and administration being the highest affected. Over three quarters of the respondents were of the view that the Operations team, Finance team as well as the IT team exerts the most influence in bringing about change in the organization.

4.4 Current state of the BRP implementation at TAZAMA Pipelines Limited

The study aimed to establish the state of the existing BRP implementation at TAZAMA Pipelines Limited. In doing so, the study sought to answer the research question: “What is the current state of the BRP implementation at TAZAMA Pipelines Limited?” The survey participants were asked to indicate the extent to which business re-engineering processes have been implemented. The results are presented in Figure 4.6.

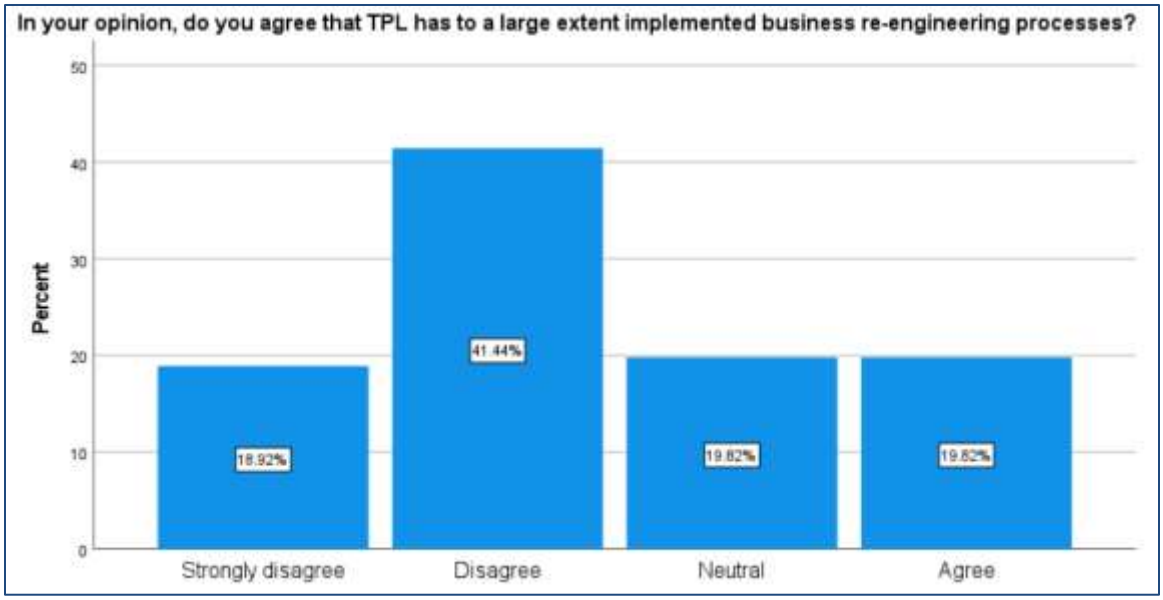

Figure 4.6: Extent of implementation of BRP at TPL

Source: Field work (2023)

The findings in Figure 4.6 show that 41.44%, representing the majority, disagreed that BRP has been largely implemented at TPL whilst 19.82% agreed that the program had been implemented. Another proportion of 19.82% remained neutral and the minority (18.92%) strongly disagreed. These results imply that BRP initiatives have not been largely implemented at the TPL necessitating further exploration for the factors impacting implementation of BRP at TPL. In other words, BRP has not yet been fully implemented by BRP.

Furthermore, the survey respondents were asked to indicate if the current state of implementation of BRP at the TRP was highly satisfactory. The results are presented in Table 4.

Table 4.1: Satisfaction of BRP implementation

Do you agree that the current state of implementation of BRP at the TAZAMA Pipelines Ltd is highly satisfactory?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Disagree	64	57.7	57.7	57.7
	Neutral	7	6.3	6.3	64.0
	Agree	31	27.9	27.9	91.9
	Strongly agree	9	8.1	8.1	100.0
	Total	111	100.0	100.0	

Source: Authors Construct, Field work (2023)

From the results in Table 4.1, majority of the participants (57.7%) disagreed that the current state of implementation of BRP at the TPL was highly satisfactory. This was followed by 27.9% who agreed whilst 8.1% strongly agreed and 6.3% were neutral. These results show that the current state of implementation of BRP at the TPL is not yet highly satisfactory implying that there are some factors impacting effective implementation of BRP at TPL.

The participants were further asked to indicate their degree of agreement to statements relating to the current state of BRP implementation at TPL. The descriptive statistics are summarized in Table 4.2. The interpretation of the mean scores (M) is as follows: for severely disagree, the mean score falls within the range of $1 \leq M < 1.5$; for disagree, the mean score falls within the range of $1.5 \leq M < 2.5$; for neutral, the mean score falls within the range of $2.5 \leq M < 3.5$; for agree, the mean score falls within the range of $3.5 \leq M < 4.5$; and for strongly agree, the mean score falls within the range of $4.5 \leq M \leq 5$ (Pimentel, 2010).

Table 4.2: Current state of BRP implementation at TPL

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
TPL has a vision statement on business process improvement	111	2	5	3.84	1.083
TPL has selected core business processes having high impact on customers	111	2	5	4.01	.694
TPL has implemented re-engineering processes in line with objectives of the company	111	2	5	3.92	1.105
BRP initiatives are have been or being implemented as per plan	111	1	5	3.83	.808
TPL has a strategic plan on business process improvement	111	2	5	4.07	.970
TPL has done reverse engineering by identifying failures in the existing processes	111	2	5	3.87	.983
The firm has spent considerable investment in effecting change management	111	2	5	3.74	1.142
TPL operations and systems have been automated	111	1	5	3.41	1.436
BRP initiatives have been aligned with existing organisational culture	111	2	5	3.95	1.021
Valid N (listwise)	111				

Source: Authors Construct, Field work (2023)

The results in Table 4.2 show a mean statistic of 3.84 and standard deviation of 1.083 showing that the largest proportion of the participants agreed that TPL has a vision statement on business process improvement. On the other hand, the mean and standard deviation of 4.01 and 0.694 respectively show that majority of the survey participants agreed that TPL has selected core business processes having high impact on customers.

More so, the mean statistic of 3.92 and standard deviation of 1.105 also show that the largest proportion of the participants agreed that TPL has implemented re-engineering processes in line with objectives of the company. The results in Table 4.2 also show a mean statistic of 3.83 and standard deviation of 0.808 implying that majority of the participants agreed that BRP initiatives have been or being implemented as per plan. The mean of 4.07 and standard deviation of 0.970 also show that majority of the participants agreed that TPL has a strategic plan on business process improvement. As also shown in Table 4.2, majority of the participants agreed that TPL has done reverse engineering by identifying failures in the existing processes as indicated by the mean statistic of 3.87 and standard deviation of 0.983.

Moreover, the results in Table 4.2 show a mean statistic of 3.74 and standard deviation of 1.142 showing that the substantial proportion of the survey participants agreed that the firm has spent considerable investment in effecting change management. However, the mean of 4.41 and standard deviation of 1.436 also show mixed feelings among the participants that TPL's operations and systems have been automated. Besides, given the findings in Table 4.2, majority of the participants agreed that BRP initiatives have been aligned with existing organizational culture. The findings in overall show that BRP has not been fully implemented at TPL. Supporting evidence was also obtained from the key informant interviews. The following are some of the responses of the key informant interviews regarding the current state of BRP implementation at TPL:

> *"The current status quo is that BRP implementation is not yet concluded. One major issue is the lack of comprehensive documentation and communication regarding the BRP as a thorough and well-documented plan is essential for guiding employees during an emergency situation. Unfortunately, Tazama Pipelines Limited has not adequately communicated this plan to its staff, leading to confusion and inefficiency and this has caused unnecessary implementation delays"* [Participant 1, Key informant Interview]

An IT expert who participated in the key informant interviews also reported:

> *"BRP implementation is still an ongoing process at TPL and many factors have contributed to this including lack of political issue and conflicts of interests as the company has joint ownership. However, the implementation is almost halfway"* [Participant 5, Key informant Interview]

Similar observations by Participant 5 were also made by Participant 14 and Participant 26:

> *"The implementation of the BRP systems at Tazama Pipelines Limited is still underway, and it has been a significant undertaking for the company which is expected to be completed soon"* [Participant 14, Key informant Interview]

> *"...despite its potential benefits, the implementation of BPR at Tazama Pipelines Limited has been progressing at a slow pace and TPL is among the large companies lagging behind in terms of BRP implementation."* [Participant 14, Key informant Interview]

4.5 Effect of BRP on firm performance of TAZAMA Pipelines Limited

This section presents the results pertaining to the main research objective where the study aimed to establish how BRP has affected the firm performance of TAZAMA Pipelines Limited. The survey participants were therefore asked to provide their rating of BRP implementation's impact on overall performance of TPL over the past five years. The results are presented in Figure 4.7.

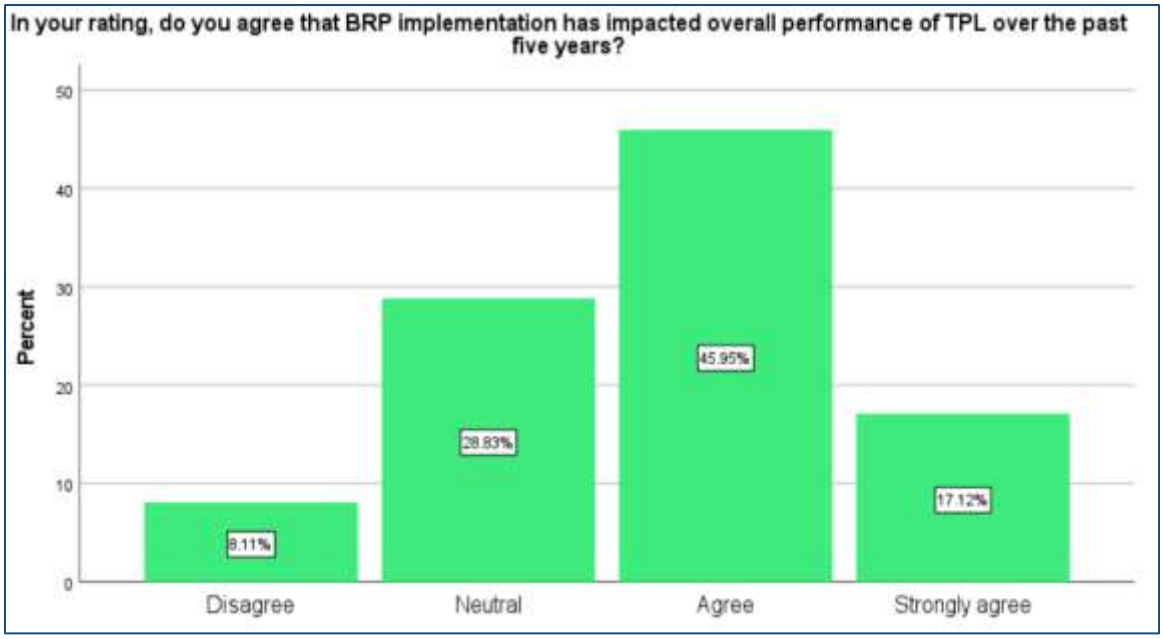

Figure 4.7: Effect of BRP on firm performance of TAZAMA Pipelines Limited, Source: Field work (2023)

The results in Figure 4.7 show that 45.95% of the participants agreed that BRP implementation has impacted overall performance of TPL over the past five years. This was followed by 28.83% who were not sure, 17.12% who strongly agreed and 8.11% who disagreed. In overall, the results imply that majority of the participants were in agreement that BRP implementation had impacted performance of TPL.

In the same vein, the survey participants were asked to indicate the way in which BRP implementation had impacted overall performance of TPL whether negatively, positively or no effect. The findings are summarized in Figure 4.8.

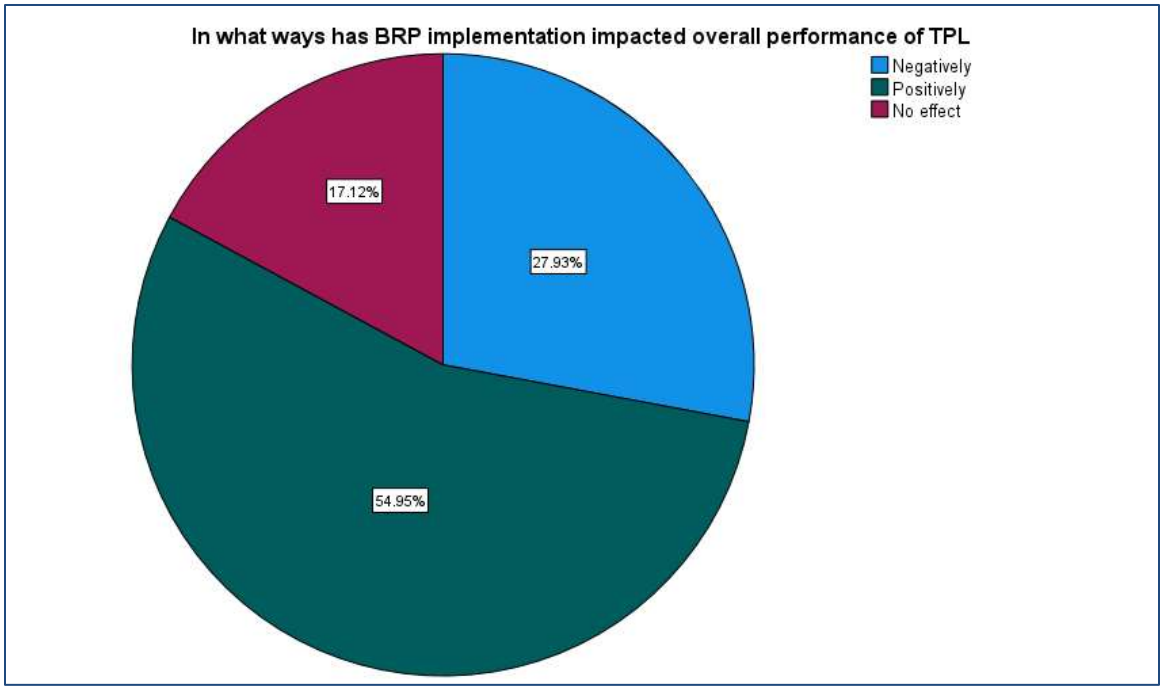

Figure 4.8: Ways in which BRP impacts firm performance of TAZAMA Pipelines Limited, Source: Field work (2023)

From the findings in Figure 4.8, majority of the participants (54.95%) indicated that BRP implementation positively impacted on firm performance of TPL, whereas 27.93% indicated that performance has been negatively impacted. However, the minority (17.12%) reported that BRP implementation has not influenced performance of TPL. In overall, the results show that BRP implementation has positively impacted performance of TPL implying that successful implementation will lead to increased performance of the firm.

Further, the respondents were asked to indicate the ways in which BRP implementation has impacted performance of TPL. The descriptive findings are presented in Table 4.3.

Table 4.3: Effect of BRP on firm performance of TAZAMA Pipelines Limited

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Realised positive growth in profit margins	111	1	5	3.83	1.086
Generated more revenue	111	1	5	3.88	.941
Experienced increased market share and competitiveness	111	1	5	3.86	.803
Realized improved quality service delivery	111	1	5	3.71	.898
Realised increased customer satisfaction	111	1	5	4.07	.735
Improved operational efficiency and effectiveness	111	1	5	4.01	.720
Increased Return on Investment (ROI)	111	1	5	4.04	.700
Realised significant decline in costs of operations	111	1	5	4.09	.869
Valid N (listwise)	111				

Source: Authors Construct, Field work (2023)

The results publicized in Table 4.3 show that majority of the survey participants agreed that through implementation of BRP, TPL has realized positive growth in profit margins (M = 3.83; SD = 1.086), generated more revenue (M = 3.88; SD = 0.941), experienced increased market share and competitiveness (M = 3.86; SD = 0.803), realized improved quality service delivery (M = 3.71; SD = 0.898), realized increased customer satisfaction (M = 4.07; SD = 0.735), improved operational efficiency and effectiveness (M = 4.01; SD = 0.720), increased Return on Investment (ROI) (M = 4.04; SD = 0.700) and realized significant decline in costs of operations (M = 4.09; SD = 0.869). From these results, it can be inferred that BRP implementation has been contributing to firm performance of TPL in various ways.

The effects of BRP implementation on firm performance of TPL was further confirmed by carrying out a bivariate correlation analysis. The results from SPSS are summarized in Table 4.4.

Table 4.4: Correlation statistics for BRP implementation and firm performance of TAZAMA Pipelines Limited

Correlations

		Firm Performance	BRP Implementation
Firm Performance	Pearson Correlation	1	.701**
	Sig. (2-tailed)		<.001
	N	111	111
BRP Implementation	Pearson Correlation	.701**	1
	Sig. (2-tailed)	<.001	
	N	111	111

**. Correlation is significant at the 0.01 level (2-tailed).

Source: Authors Construct, Field work (2023)

The results displayed in Table 4.4 show a positive Pearson correlation statistic of 0.701 which is significant at 5% as the p-value is less than 0.001. These correlation statistics show that there is strong positive relationship between BRP implementation and firm performance. These results show that BRP implementation can be a tool for sustained performance of TPL.

4.6 Factors affecting the successful implementation of BRP at TAZAMA Pipelines Limited

The study further aimed to determine factors influencing the effective implementation of BRP at TAZAMA Pipelines Limited. The participants to the survey were therefore asked to indicate if there were factors that influence effective implementation of BRP. The findings are shown in Figure 4.9.

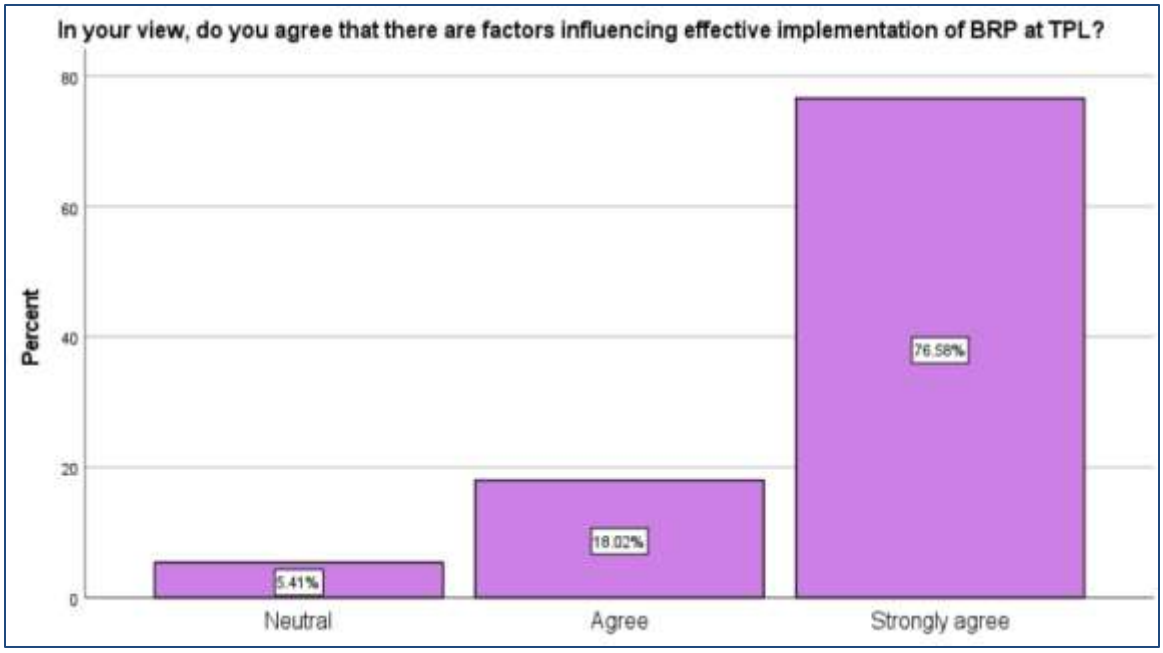

Figure 4.8: Existence of factors influencing effective BRP implementation at TPL, Source: Field work (2023)

The findings shown in Figure 4.8 designate that 76.58% of the participants strongly agreed that there were factors influencing effective implementation of BRP at TPL. Another proportion of 18.02% agreed that were factors influencing effective implementation of BRP whilst the minority were not sure (5.41%). From the results, it can be inferred that there are factors influencing effective implementation of BRP at TPL.

The participants were therefore requested to indicate the factors influencing effective implementation of BRP at TPL. From the survey responses, bivariate correlation analyses were undertaken to evaluate the impact of each factor on BRP implementation at TPL. The results are presented in Table 4.5.

Table 4.5: Correlation statistics for factors influencing BRP implementation

		BRP Implementation
BRP_Implementation	Pearson Correlation	--
	N	111
Lack of IT supporting infrastructure	Pearson Correlation	-.351**
	Sig. (2-tailed)	<.001
	N	111
Resistance to change by employees	Pearson Correlation	-.448**
	Sig. (2-tailed)	<.001
	N	111
Inadequate training of employees	Pearson Correlation	-.305**
	Sig. (2-tailed)	.001
	N	111
Lack of stakeholder involvement in BRP implementation	Pearson Correlation	-.761**
	Sig. (2-tailed)	<.001
	N	111
Lack of financial, technical and skilled human resources	Pearson Correlation	-.616**
	Sig. (2-tailed)	<.001
	N	111
Lack of top management support and commitment	Pearson Correlation	-.633**
	Sig. (2-tailed)	<.001
	N	111
Lack of effective communication	Pearson Correlation	-.537**
	Sig. (2-tailed)	<.001
	N	111
Poor organisational culture	Pearson Correlation	-.768**
	Sig. (2-tailed)	<.001
	N	111
Lack of awareness among key stakeholders	Pearson Correlation	-.543**
	Sig. (2-tailed)	<.001
	N	111
External environment (political and macroeconomic environments)	Pearson Correlation	-.468**
	Sig. (2-tailed)	<.001
	N	111

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Source: Authors Construct, Field work (2023)

From the findings presented in Table 4.5, the factors had negative correlation statistics which are statistically significant at 5% level of significance. The results show that BRP implementation at TPL is significantly impacted by lack of IT supporting infrastructure, resistance to change by employees, inadequate training of employees, lack of stakeholder involvement in BRP implementation, lack of financial, technical and skilled human resources, lack of top management support and commitment, lack of effective communication, poor organizational culture, lack of awareness among key stakeholders and external environment (political and macroeconomic environments). These findings were also validated by the findings from the key informant interviews. The following are some of the verbatim statements of the key informants impacting BRP implementation at TPL:

> *"The current status quo is that BRP implementation is not yet concluded. One major issue is the lack of comprehensive documentation and communication regarding the BRP as a thorough and well-documented plan is essential for guiding employees during an emergency situation. Unfortunately, Tazama Pipelines Limited has not adequately communicated this plan to its staff, leading to confusion and inefficiency and this has caused unnecessary implementation delays"* [Participant 3, Key informant Interview]

> *"One of the leading factors is lack of resource availability as well as lack of ICT tools and supporting infrastructure. More so, inadequate resources allocated towards BPR implementation have also slowed down progress at TPL. Implementing BPR requires significant financial investment for training employees on new systems and technologies, as well as for acquiring necessary software and hardware infrastructure. Insufficient funding by TPL has also resulted in delays in implementing necessary changes such as BRP"* [Participant 9, Key informant Interview]

> *"Lack of effective leadership support has also contributed to slow progress in implementation of BRP. Successful BPR implementation requires strong leadership commitment and support throughout all levels of management. Without this*

support, employees feel not motivated or empowered to support the change" [Participant 21, Key informant Interview]

"In addition to all the factors raised earlier in passing, I put much emphasis on the issue of lack of financial resources and ICT facilities which I am seeing are the major challenges for effective BRP implementation. Furthermore, external factors such as regulatory requirements, political interference and macroeconomic instability have also been delaying the implementation process" [Participant 23, Key informant Interview]

"Tazama Pipelines Limited has faced several factors that have delayed the effective implementation of their BRP. Firstly, one major factor is the lack of financial resources as implementing a comprehensive BRP requires significant investment in infrastructure, technology, and training. Secondly, organizational culture plays a significant role in implementation of BRP as Tazama Pipelines Limited has a hierarchical culture and centralized organizational structure that hinders effective communication and collaboration among different departments thereby impacting implementation of BRP. Additionally, resistance to change from employees also contributes to the delay in implementing BRP at Tazama Pipelines Limited." [Participant 28, Key informant Interview]

4.7 Benchmarking model for effective implementation of BRP at TAZAMA Pipelines Limited

Lastly, the research study aimed to propose a benchmarking model for effective implementation of BRP at TAZAMA Pipelines Limited. The model was developed based on the findings presented earlier in this chapter, the research objectives, the conceptual framework and theoretical models such as the RBV theory and the 8-S framework for strategy implementation. The model developed is presented in Figure 4.7.

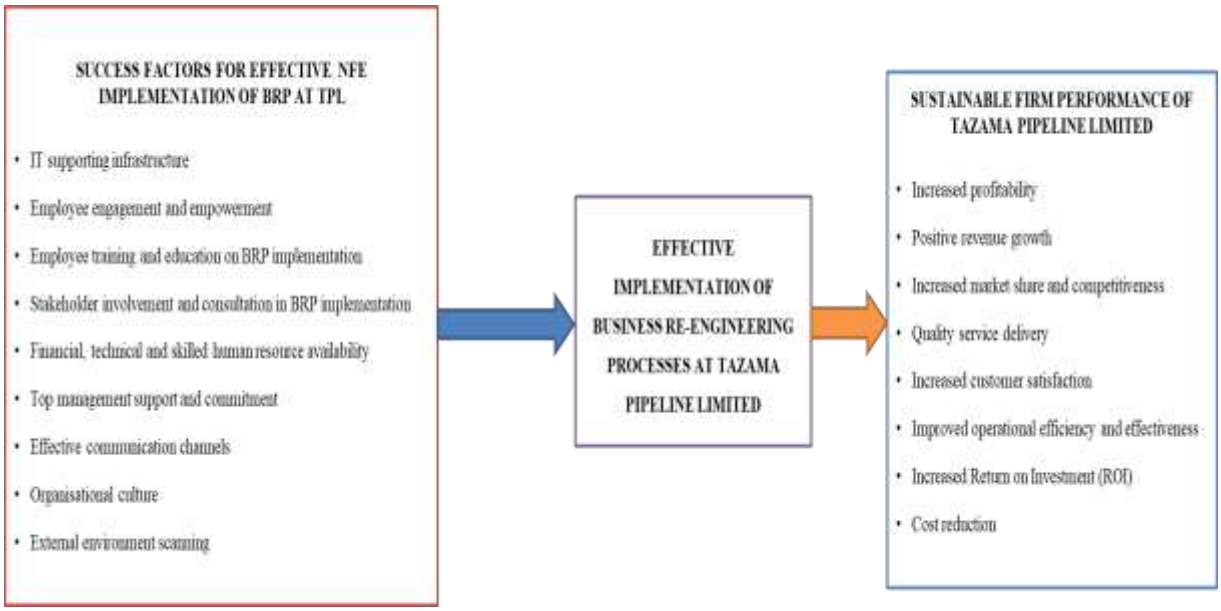

Figure 4.7: Benchmarking model for effective implementation of BRP at TPL

Source: Researcher's constructions using research findings

The model presented in Figure 4.9 represents a guiding model that can be employed at TPL for successful implementation of BRP towards sustainable firm performance.

4.8 The Effect of Information Technology and BRP

The first objective of this research study was to evaluate the current state of the BRP implementation at TAZAMA Pipelines Limited;

The subsequent section will focus on exploring the different factors that are involved in BRP within the company context.

Information systems facilitate the interaction between humans and technology. An information system's data is analyzed, planned, evaluated, and managed with the use of information technology, a subset of information systems. In a larger sense, information technology (IT) refers to the entire electronic medium that facilitates networking, communication, and information processing. IT facilitates business operations by more effectively fusing people and process. Information technology makes it possible to extend processes beyond their operational and functional boundaries and promotes entities that are process-driven. BRP uses information technology as a facilitator to rebuild and revamp its

business processes in order to generate significant growth. It can improve information availability and effectively coordinate among various functional units. (Bhaskar & Singh, 2014)

In terms of how technology has influenced the implementation of BRP at TAZAMA, respondents stated that there has been a significant increase in investment in infrastructure maintenance and monitoring that has been enhanced with new technology. The IT department has been a critical part of this implementation.

"Rapidly evolving technology has resulted in significant savings from losses caused by pipe leaks and theft throughout the pipeline's length. Technology has improved every business model and has accelerated transformation in every firm.

According to one of the respondents from the Engineering Department, the firm now employs an IT system that has made both internal and external reporting simple, in turn changing operations in the department... "*The new IT system has given us much-needed motivation since it has simplified our job*". Personal Interview (2023).

According to all the respondents, IT is the primary component that makes change possible. A third of the respondents, when asked to describe the distinction between the old and new IT systems, stated that the old system was standalone and more manual than the new one, which works in real-time. Shared databases, image processing technologies, electronic data interchange and financial transfers, and simple access to necessary information, according to a respondent from the IT Department, have made technology a crucial component of BRP at TAZAMA. Respondents added that by logically connecting the business processes, IT had made it easier to make decisions and to exercise proper control. Additionally, respondents noted that communication and networking systems are assisting in the centralization of control over all the geographically dispersed functional units within the nation now that the company is in charge of storage terminals in four provinces. The Administration's respondents claimed that the blending of technology and business processes had made it simple to overcome time and geographical obstacles, making the organization far more responsive to the business environment.

The results concerning IT's responsiveness in real time are consistent with those of Srinivasan (2011), who came to the conclusion that BRP necessitates organizational restructuring with the aid of simplification and standardization, as well as IT like multimedia, the internet, MRP II, CAD/CAE, electronic commerce (EC), and concurrent engineering (CE).

The respondents continued by stating that impediments to an efficient flow of crude oil from Tanzania to Zambia have been removed through organizational restructuring through standardization and reduction of inefficient procedures and operations. The use of various IT to enhance the integration of many functional areas can help to ease the seamless flow of information.

Structure and Functionality -The primary goal of BRP, according to a finance department respondent, is to deliver high-quality goods and services at reasonable prices in a timely manner. The respondent also noted that while TAZAMA's operational system is generally well-organized, not all members of staff are familiar with the project's goals. The same respondent proposed that TAZAMA's organizational structure be modified to emphasize simple coordination of the basic business processes in the chain from the suppliers to the customers. This was as opposed to the current complex structures of the functional differential hierarchies, where the employees at the lower level felt that they did not have as much delegation as they thought they should have, considering the organizational structure. It would be very challenging to establish clear reporting lines between functions and from the top to the bottom of the hierarchy because it was discovered that the structure at TAZAMA is still cloaked in mystery. Organizational structures are crucial for firms because they enable them to execute effective decision-making processes, but having one such as the one observed at TAZAMA may generate reporting issues both now and after the BRP project is over. Contrary to what the respondents said, organizations may make better judgments faster by giving specialized positions to lower-level staff.

4.9 Changes brought about by BRP in the IT Department

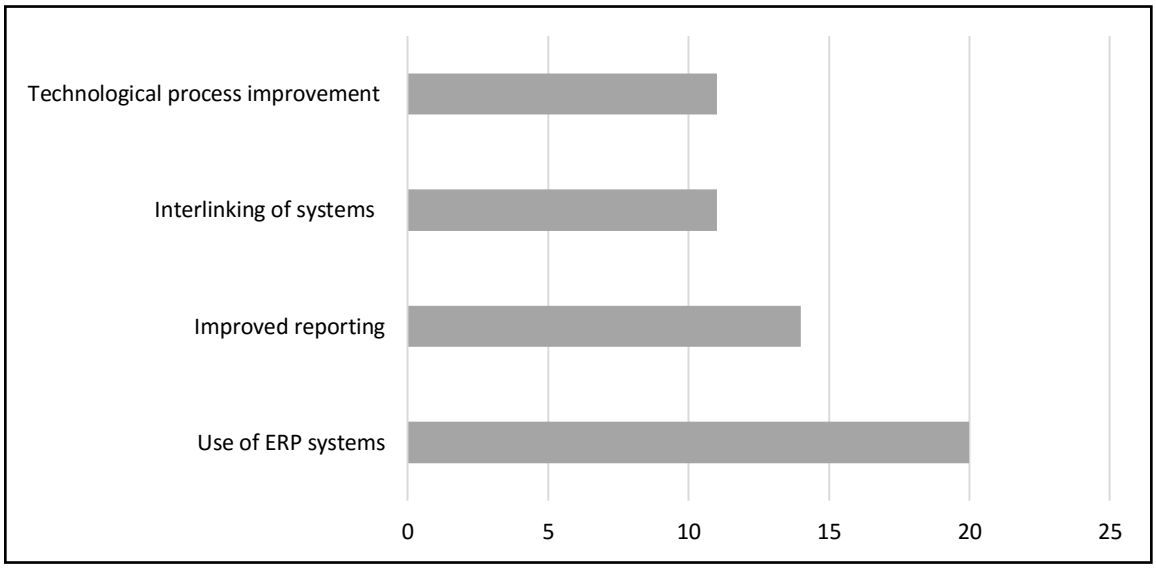

Figure 4.5 CHANGES BROUGHT ABOUT BRP IN THE IT DEPARTMENT

The present IT system's adoption has had a good effect on the participants' work at TAZAMA. The method brought about numerous important modifications, according to the study of the 30 participants' comments.

Adoption of ERP systems across all depots, which enables online ordering easy and improves overall efficiency, is one major shift. The organization's workflow was probably optimized and enhanced by this deployment. Participants also stated that the new IT system made it simpler to generate reports, indicating enhanced productivity. Additionally, it became easier to access pertinent data, which facilitated easier information retrieval and analysis.

Additionally, the effective integration of the IT system with other departments has created opportunities for greater collaboration, increased communication, and better data sharing among other organizational roles. It is anticipated that this integration would promote collaboration and enable a smooth exchange of information between departments. Despite the lack of specifics, participants acknowledged technical developments in procedures. Nevertheless, it may be assumed that these technical advancements have led to general increases in effectiveness and efficiency.

Positive effects of the present IT system's installation may be seen at TAZAMA. The organization's operations and workflow have been significantly improved owing to the use of ERP systems, enhanced reporting capabilities, system interoperability, and technical process improvements.

4.10 Satisfaction with Current IT Changes

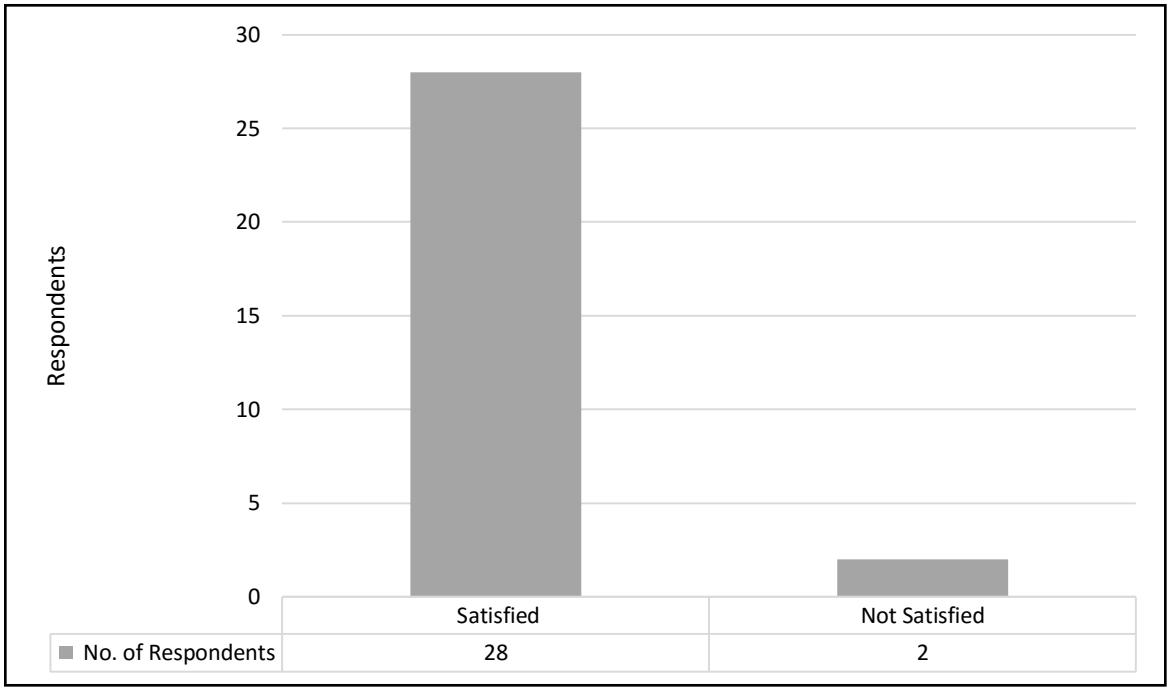

Figure 4.6 SATISFACTION WITH CURRENT IT CHANGES

With the exception of two respondents, it is clear from the analysis of the 30 participants' replies that virtually all of them acknowledged the existence of recent changes brought about by Business Process Re-engineering (BRP) in the IT department at TAZAMA. This information clearly shows that the IT department has undergone major changes as a result of the BRP deployment.

These adjustments cover a wide range of topics, such as the implementation of new IT systems, process enhancements, improved reporting capabilities, and other technical developments. The overwhelming majority of participants gave favorable feedback, indicating that BRP had a good influence on the IT department and that the firm had successfully adopted improvements to enhance IT operations and support business

processes. To further comprehend the precise changes brought about by BRP in the IT department and their consequences for TAZAMA, additional research is advised.

The responses of the 30 participants are shown in the chart, which focuses on the modifications made by BRP in the IT division of TAZAMA. The adoption of BRP and its implications on the organization's IT systems were specifically addressed in the questions that were posed to the participants.

The results of the 28 (93) % of respondents who were satisfied with the new IT system offers insightful information on how the participants saw and dealt with the BRP-related developments in the IT department. There is agreement among the 28 participants, indicating that BRP-related changes have really been made to the IT systems. Participants also provided excellent comments on the recent IT modifications, including enhancements in reporting, user friendliness, system interoperability, accuracy, and the deployment of ERP systems throughout depots.

The majority of participants (28 out of 30) also indicated satisfaction with the current IT modifications, praising advantages including enhanced workflows, streamlined reporting, improved order tracking, and overall execution. It is important to note that two individuals voiced discontent, highlighting potential areas for improvement in the IT systems. In conclusion, the graphic offers insightful information on how BRP has affected TAZAMA's IT department. It highlights improvements, gauges participant satisfaction generally, and points out prospective areas for further development.

4.11 Ease of Use and Effectiveness of the Current IT System

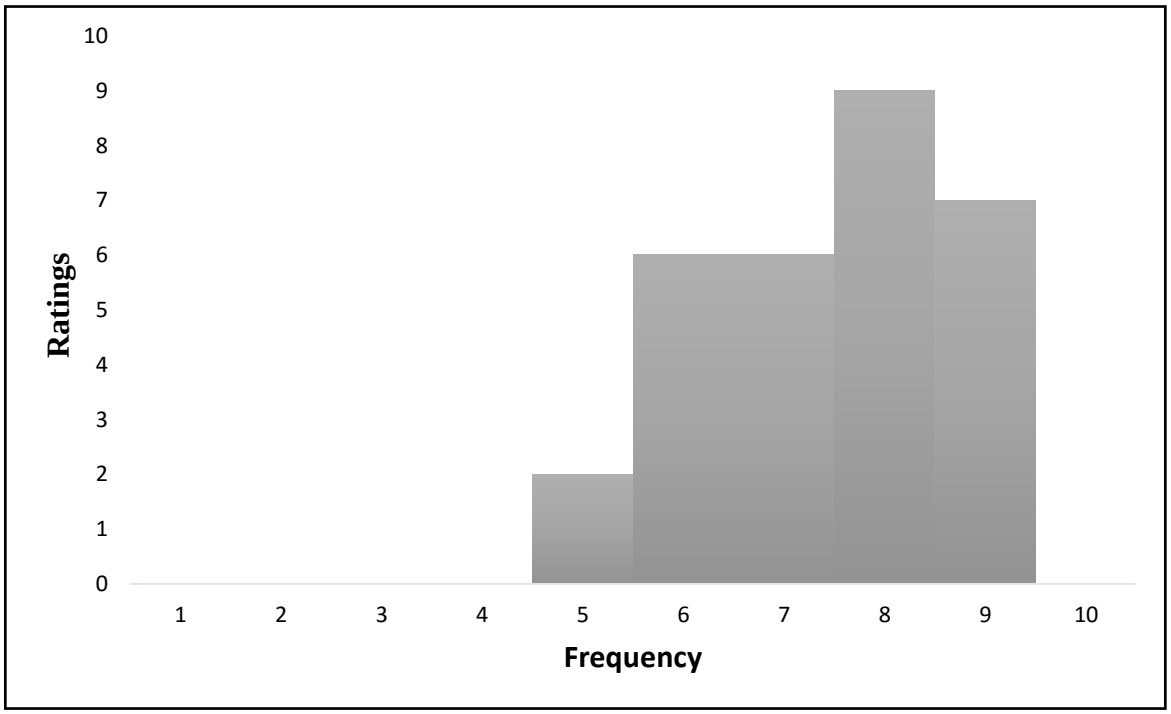

Figure 4.6 SATISFACTION WITH CURRENT IT CHANGES

The bar chart shows how the respondents' evaluations, which represent their opinions of the usability and efficacy of the current IT system, were distributed. The bulk of scores are between 6 and 9, reflecting an overall upbeat outlook. Notably, there is a surge at rating 8, indicating that respondents were more satisfied overall.

The fact that two respondents offered a rating of 5, which indicates a considerably lower degree of satisfaction, must be noted. This emphasizes the need for more research and possible adjustments in particular parts of the IT system to improve user experience and solve the issues brought up by these people. The graph gives a summary of the user ratings and offers insightful information about how respondents at TAZAMA perceive the usability and efficacy of the present IT system. The bulk of evaluations are favorable, peaking at an 8, although the prevalence of lesser ratings points to possible areas for improvement.

4.12 Differences between the previous IT system and the New System

Table 4.2 Differences between old IT system and the new system

IT Systems Differences	
Previous	**New**
Standalone	Interlinked
Manual	Automated
Not Linked	Linked
Not integrated	Integrated
Slow	Faster

The contrasts between the old IT system and the new system at TAZAMA Pipelines Limited are compared in Table 4.4. The table shows important facets of the systems, such as their traits and capabilities. The table gives a clear comparison of the key topics, making it simple for viewers to spot the most significant variances.

The table demonstrates how the new IT system is interconnected and automated, in contrast with the old system, which was defined as standalone and mostly manual. Additionally, while the new system has increased connectivity across many tasks, the prior system was not connected to or integrated with other departments. In comparison to the old system, the new system is reported to process information and provide reports more quickly. Table 4.4 offers an insightful comparison of the changes between the old and new IT systems, highlighting the developments and improvements made possible by the adoption of the new system.

4.13 Areas of success in the BRP implementation at TAZAMA Pipelines Limited

According to the conclusions drawn from the table 4.3 below, a number of variables contributed to TAZAMA Pipelines Limited successful execution of business re-engineering.

Table 4.3 Areas of success in the BRP implementation at TAZAMA Pipelines Limited

Aspect	Description
Operations	TAZAMA is now transporting finished diesel through the pipeline and distributes the products to oil marketing companies.
	Operations have been improved through the use of information technology, making processes mechanized.
Structure	TAZAMA has a functional reporting structure where departments report to a head of section and directorate.
Culture	TAZAMA has an organizational family culture and an open-door policy.
	The organization deals with different people from outside the environment, fostering a multicultural setting.
Policies	TAZAMA has structured manuals, including systems and procedures, to guide the organization's operations.
	The manuals and procedures have not been updated for years and require review.
Business environment	TAZAMA operates in a highly regulated industry overseen by the Energy Regulation Board.
	Decisions made externally by the Ministry of Energy and the Energy Regulation Board affect TAZAMA.

Operations have greatly improved, increasing efficiency and effectiveness, as a result of the use of information technology and automated procedures. The functional reporting structure of TAZAMA guarantees unambiguous responsibility and departmental collaboration. Collaboration is fostered and a healthy work atmosphere is supported by the organization's welcoming culture and open-door policy. Although TAZAMA has established structured manuals and processes, these need to be examined and updated to meet present business needs. In addition, the highly regulated nature of the energy sector and choices made by external regulatory authorities have an influence on TAZAMA's

operations and Business Re-engineering execution. TAZAMA may improve its Business Re-engineering procedures and general performance as a pipeline transportation firm by utilizing technology, fostering a good culture, updating rules, and responding to external requirements.

4.14 Department Affected by the Implementation of BRP

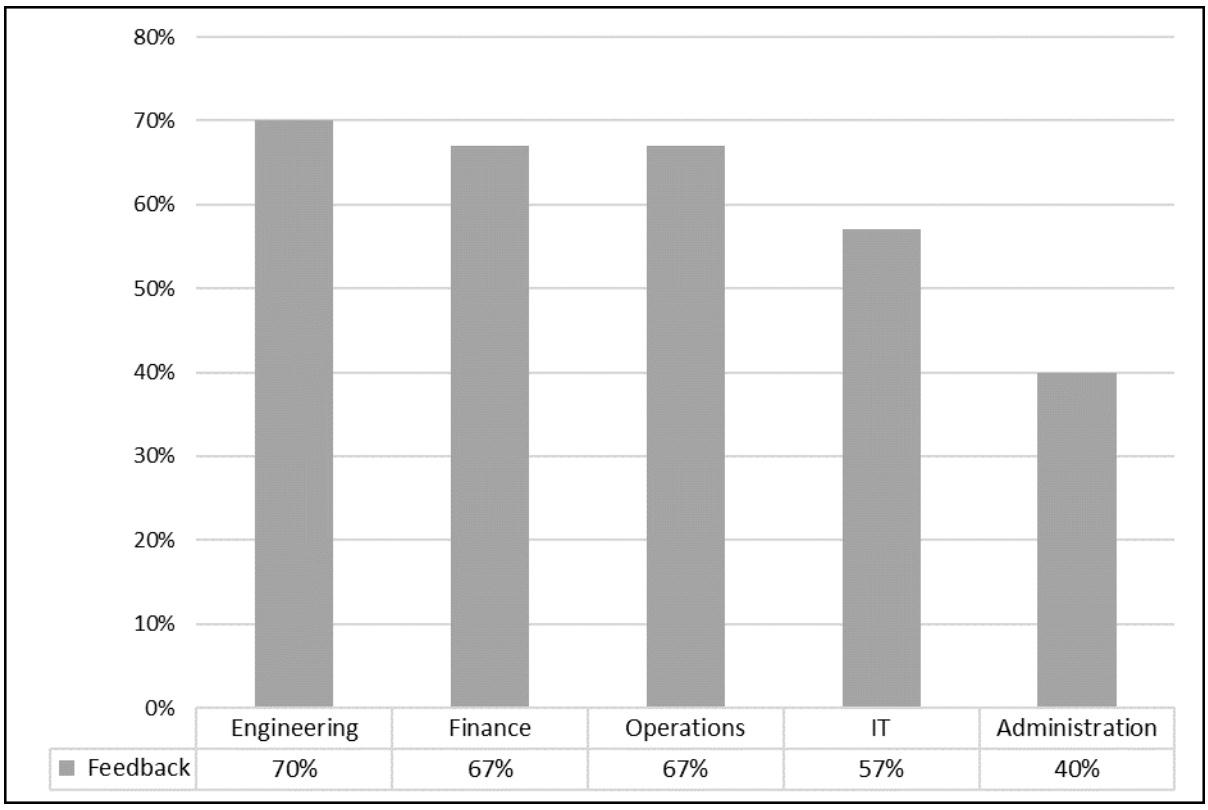

Figure 4.8 DEPARTMENT AFFECTED BY THE IMPLEMENTATION OF BRP

The distribution of responses across various departments and their participation in the Business Process Re-engineering (BRP) implementation at TAZAMA are shown in Figure 4.8 It offers insightful information on the relative importance of BRP in each department. The diagram makes apparent how different departments' levels of engagement differ. With 70% and 67% of respondents in the engineering and finance departments, respectively it is clear that BRP has had a substantial influence on these departments' operations. With 67% and 57% of respondents, respectively, the operations and IT departments come in second and third. With 40% of respondents, the administration department is comparatively less involved.

The percentage distribution of respondents is clearly displayed in this bar chart, providing insight into the departments most negatively impacted by BRP. The data can be helpful for assessing the organizational effects of BRP and highlighting particular areas for more research and BRP process development.

4.14 Group of People Exerting the Most Influence in Bringing about Change

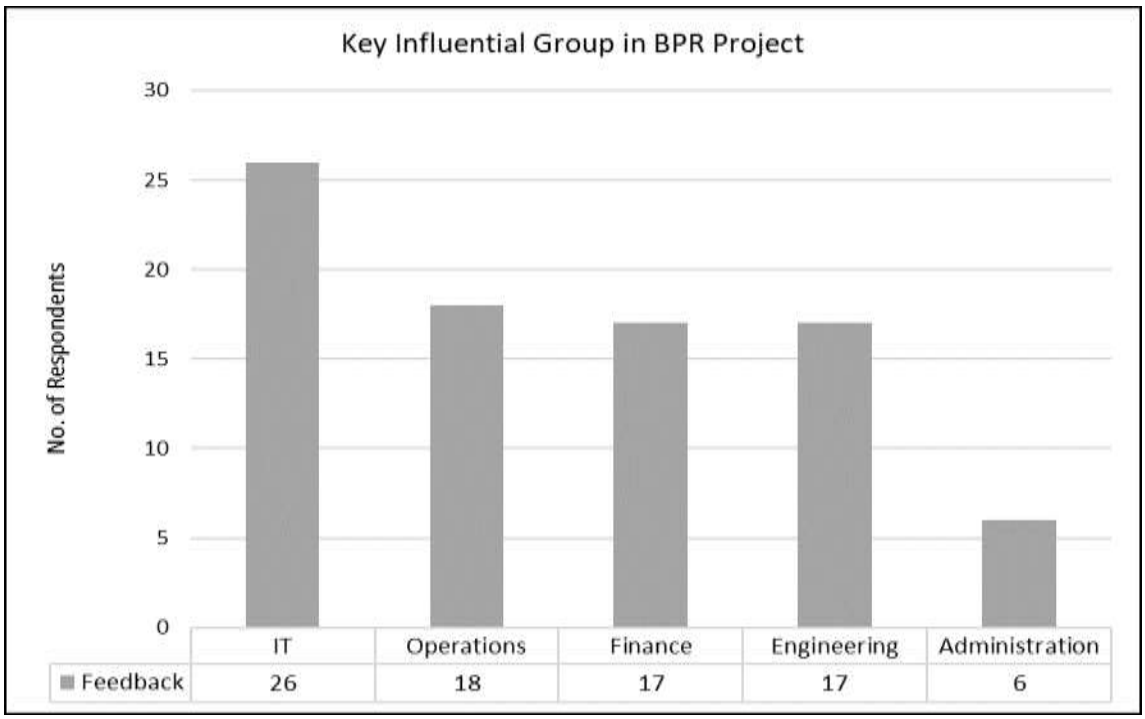

Figure 4.9: KEY INFLUENTIAL GROUP IN BRP PROJECT. SOURCE: (FIELD WORK, 2023)

The percentage distribution of replies from different teams according to their effect on the BRP project at TAZAMA is shown in the figure above. The diagram clearly illustrates the various degrees of influence among the various teams. Notably, the IT team has the biggest percentage (70%) and so has a considerable influence on the BRP project's ability to adapt. The Operations and Finance teams are not far behind, with rates of 60% and 56.67%, respectively. With percentages of 40% and 20%, respectively, the Engineering and Administration teams, on the other hand, display considerably less influence. The distribution is clearly illustrated graphically below, which also provides a clear idea of the parties that have the most sway over the BRP project. This data might be useful for

identifying important stakeholders and include them in project-related decision-making processes.

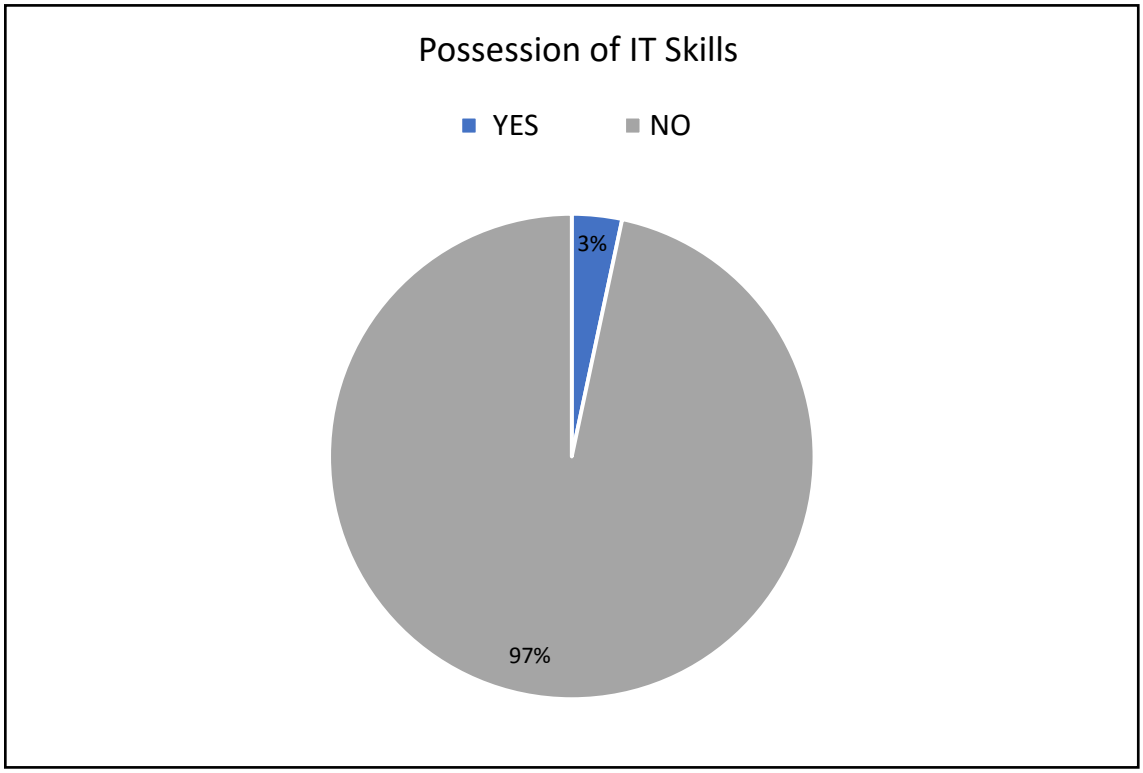

Figure 4: 10 STAFF SKILLS IN OPERATING USING THE NEW IT PROCESS SOURCE (FIELD WORK, 2023)

The distribution of responses about IT proficiency among members of staff in various departments is shown in the graph above. The graph demonstrates that 97% of respondents, a majority, stated that the members of staff in their particular departments lacked the necessary abilities to use the new IT procedure. Only one IT department respondent said that their group had the required expertise. For staff workers in various departments to properly use the new IT process, skills development and training are required. The emerging data highlights how crucial it is to fill skills gaps and offer the aid needed for members of staff across the board to improve their IT skills.

4.15 Challenges in the implementation of Business Re-engineering process:

One of the main goals of this study was to examine the difficulties that arise during the implementation of BRP within the company, as well as the tools available to minimize any negative impact. The subsequent section delves into this particular aspect by collecting and analyzing the opinions of the respondents regarding this matter.

The training programs have been trying to ensure acceptance to change. However, half of the respondents said that the communication process within the system was yet to be improved to the expectations of the staff. They cited Strategic Planning and the resulting plans as not easily communicated In addition, performance appraisals were said not to have not been done effectively taking into account the new system in place which staff indicated should be the basis of assessment.

With regards to the role that management has been playing in the implementation of BRP, a third of the respondents felt that in as far as change management is concerned, it was difficult for members of staff to comprehend the changes in the firm. This is because leadership was driven from the top and rarely was communication of fundamental objectives whether periodic or longitudinal done to the rest of the staff. This is with exception from times when communication came from the BRP implementation team. Other than the workshops, the rest of the staff were said not to have been receiving constant feedback on the position of the project since it was implemented. These findings however were inconsistent with the assertions on the role that IT has played in the BRP implementation so far. The majority of the respondents said that IT has now been formalized and some tasks and responsibilities that were done by some staff have been taken away and allocated to the implementing team. Although this was not much of a demotivating factor, it was however a source of concern by respondents from the Engineering department that formalization determines how much standardizing there is across the system. It may affect functions, systems, job descriptions, and the flow of information with high formalization that are often more mature and highly systematized. Done well, this kind of structure should boost innovation, not stifle it.

Half of the respondents said that the transition team met with other governmental agencies and private businesses to learn about the successful ways to plan workforce redeployment, retraining, and cost reductions. These external teams included Government teams as well as consultants.

4.16 Challenges in acceptance to Change Initiatives

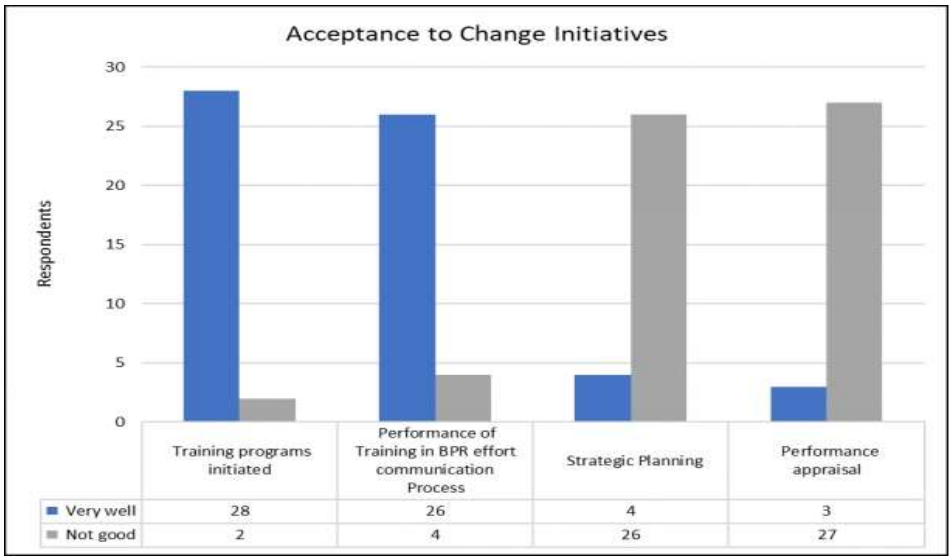

Figure 4.11: ACCEPTANCE TO CHANGE INITIATIVES SOURCE: (FIELD WORK, 2023)

The analysis of the provided data offers valuable insights into various aspects of the change management process within the BRP project. In terms of training programs initiated, the responses indicate a mixed picture. While some participants mentioned constant refresher trainings and well-planned programs throughout the year, others expressed concerns about very little or sporadic training initiatives. This suggests that there is room for improvement in ensuring consistent and comprehensive training opportunities for employees involved in the BRP project.

Regarding the performance of training in the BRP effort communication process, half of the respondents reported that communication processes have been enhanced. This indicates a positive impact of the training programs on improving communication within the project. However, there were also indications of poor communication and the need for further improvement in this area. This highlights the importance of addressing communication

gaps and implementing effective communication systems to facilitate smooth and efficient BRP efforts.

The responses related to strategic planning reveal challenges in effectively communicating and cascading strategic plans throughout the process. Participants expressed concerns about the lack of proper communication and the plans not reaching lower levels of the hierarchy. This highlights the need for improved communication strategies and alignment between the strategic plans and their various levels.

Furthermore, data on performance appraisal reflects a significant need for improvement. The majority of respondents rated the performance appraisal process poorly, indicating that there are existing issues or gaps in this area. The absence of high ratings suggests the absence of a well-established and effective performance appraisal system. Addressing this gap is crucial to provide employees with meaningful feedback and align their performance with the goals of the BRP project. The analysis emphasizes the importance of comprehensive and consistent training programs, effective communication processes, aligned strategic planning, and a robust performance appraisal system within the BRP project. By addressing these areas for improvement, systems can enhance change management practices and increase the likelihood of successful BRP implementation.

4.17 Assessing Technology's Impact

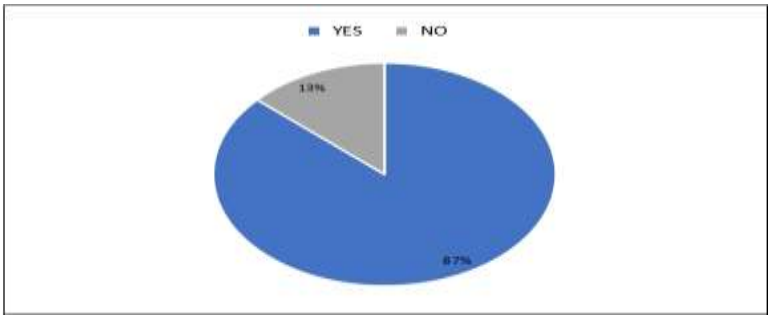

Figure 4.12 THE ROLE OF IT IN DRIVING CHANGE (FIELD WORK, 2023)

The analysis of data reveals that the majority of respondents (26 out of 30) consider IT to be the main factor enabling change in the BRP project. Their reasons emphasize the digital nature of processes and the role of IT in processing information. Furthermore, they

highlight the cost-reducing benefits of online-based operations. However, a small number of respondents (4 out of 30) believe that BRP projects involve more than just IT, suggesting the need for additional factors or considerations. Overall, the findings indicate that IT-driven initiatives play a significant role in facilitating change in the BRP project, aligning with the majority opinion among the respondents.

A respondent from the IT department said "IT at TAZAMA has played a significant role in the success of reengineering. As BRP has gained importance to develop inter-departmental communication, alliances and cross company relationships, Information technology supports and aids such reengineering efforts. We have benefited greatly from Web services, database and repositories which have helped with capturing customer preferences, automation of repeated processes and marketing analytics"

When asked about the cost implications of implementing such a huge project and if it did not negatively affect the company's resources, a Respondent from the Finance department said:

"In as much as the introducing new technology to any organization has a huge cost, in our case, IT has enhanced the product development by supplying state-of-the-art development processes, e-commerce and control of intellectual property. Digital content aids, knowledge management and e-learning have also been the benefits we have seen with the biggest benefit being the diminishing costs of doing business overall resulting in to business optimization''

4.17 Role of Top Management in the Change Initiative

In the responses, top management plays a significant role in both change management and leadership aspects of the change initiative. Out of the 30 responses analysed, 15 responses highlight the role of top management in change management, emphasizing activities such as providing resources, organizing meetings, sensitizing team members, and creating a conducive environment for change management.

Similarly, 15 responses highlight the leadership role of top management, including providing financial support, engaging middle management, giving guidance, and driving the change initiative from the top. The data suggests that top management plays a crucial role in driving and managing the change initiative at TAZAMA, both in terms of change management activities and displaying effective leadership.

4.18. Changes Noticed as a Result of the BRP Project

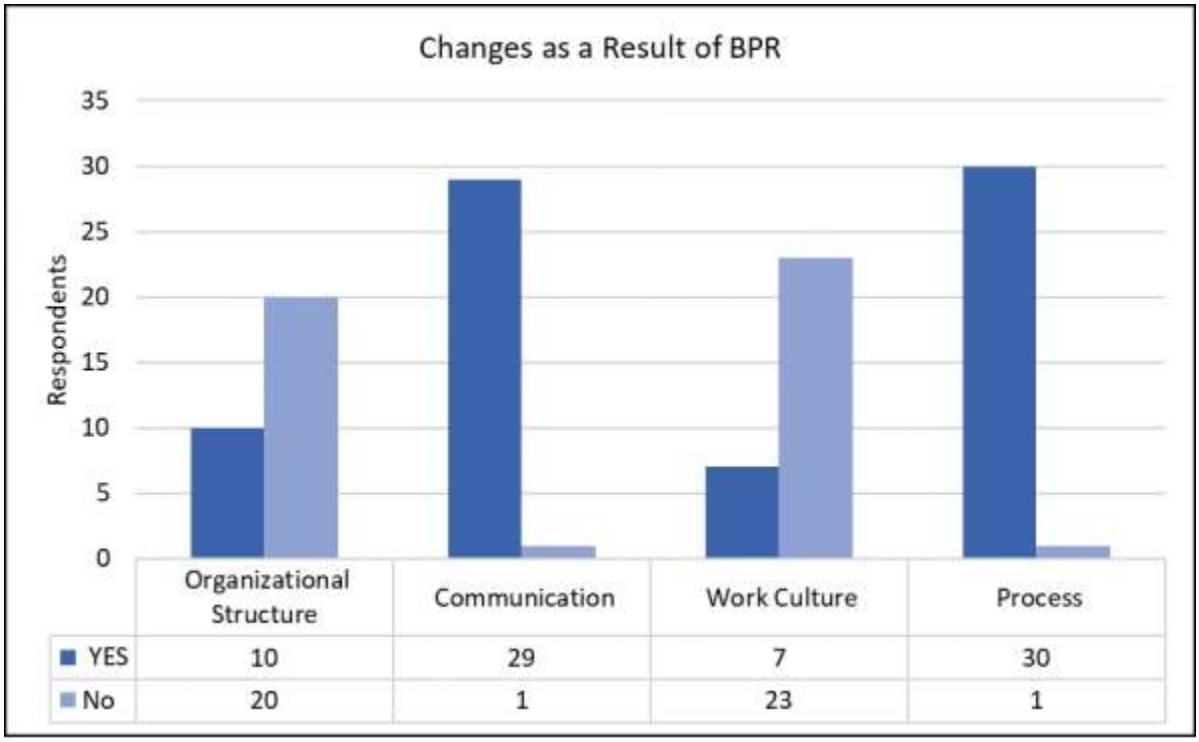

Figure 4.13 CHANGES AS A RESULT OF THE BRP PROJECT, SOURCE (FIELD WORK, 2023)

The chart presents the respondents' observations on the changes brought about by the Business Process Reengineering (BRP) project at TAZAMA. The chart displays the categories of structure, communication, work culture, and process, indicating the count of respondents who noticed positive or negative changes in each category.

The chart highlights that communication has seen the most noticeable improvements, with a majority of respondents indicating positive changes. However, work culture shows the

least significant changes, as reported by a significant number of respondents. Overall, the chart provides a visual representation of the impact of the BRP project on various aspects of the organisation, enabling a quick assessment of its effectiveness. It can be used to identify areas requiring further attention or enhancement.

4.19 Transition Team Interactions

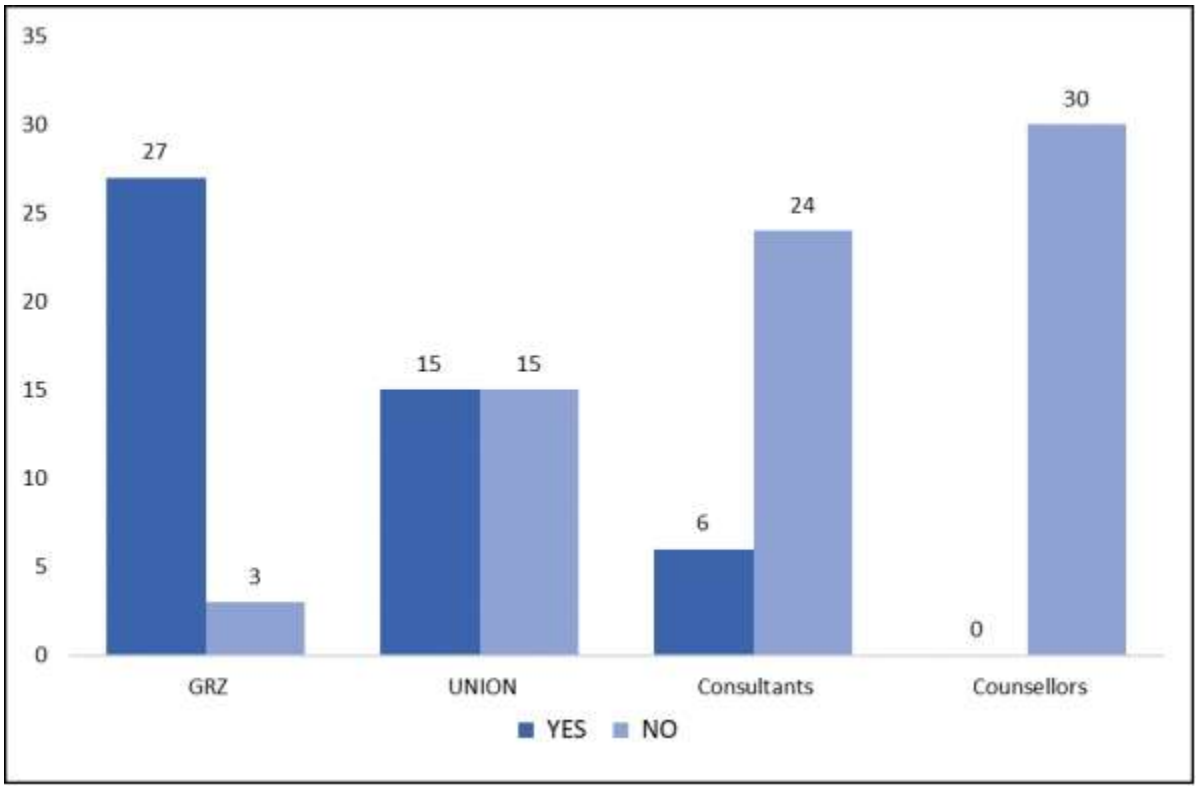

Figure 4.14 TEAM INTERACTIONS SOURCE: (FIELD WORK, 2023)

The graph shows that the majority of participants responded positively to the interaction with the GRZ 90% indicating a positive interaction and only 10% responding negatively. For the UNION, the responses are evenly split, with 50% indicating a positive interaction and 50% responding negatively.

The interaction with consultants received a lower percentage of positive responses, with only 20% indicating a positive interaction and 80% responding negatively. In the case of Counselors, none of the participants responded positively, resulting in a 0% positive interaction rate, while 100% responded negatively.

Furthermore, the interactions with the Energy Regulation Board and the Ministry of Energy received positive responses from all participants, indicating a 100% positive interaction rate. This graph above provides valuable insights into the perceptions of participants regarding the interactions of the transition team with different entities during the BRP project. It highlights areas where positive interactions were prevalent and areas where improvements may be needed for better collaboration and engagement with various stakeholders.

4.20 Options to handle the challenges and issues identified

One of the main goals of this research study was to address identified challenges and issues in order to leverage the opportunities presented by BRP implementation.

4.20.1 Suggestions for BRP Process

Table 4.4 Suggestions for BRP Process

BRP Process Phase	Suggestions	Frequency
Planning Period	More time for planning	3
	More user involvement	1
	Consider key indicators	1
Implementation Process	More engagement with users	2
	Consultations with users	2
After Implementation	More user involvement	1
	Continuous improvement	2
	Constant review of process	1
	Consider variance analysis	1
	Continuance improvements	2
	Constantly check the system	1
	Room for further improvement	1

The table presents a summary of suggestions provided by respondents regarding the implementation of the Business Process Re-engineering (BRP) process. The suggestions are categorized based on the three phases of the BRP process: planning period, implementation process, and after implementation. In the planning period, the suggestions

include allocating more time for planning, involving more users in the process, and considering key performance indicators.

During the implementation process, respondents recommended more engagement and consultation with users to ensure smooth implementation. After the implementation, suggestions included continuous improvement, constant review of the BRP process, consideration of variance analysis, and involvement of users in ongoing improvements.

The table above provides a concise overview of the suggestions and the corresponding counts for each suggestion, allowing for easy identification of the key areas for improvement throughout the BRP process.

4.21 Chapter Summary

This chapter presented the results from interviews with the respondents. It shows the responses on the challenges of implementing BRP, what the respondents felt about the current IT system, management's role in the implementation of BRP, ranging from training issues to communication challenges.

The chapter highlighted the differences between the old and the new IT system showing the important facets of the systems, such as their traits and capabilities giving a clear comparison of the key issues as well as the ease of use and effectiveness of the current IT System.

CHAPTER FIVE: DISCUSION AND ANALYSIS

5.0 Introduction

This chapter discusses the findings of the study, whose objective was to determine how business process re-engineering (BRP) has affected the performance of TAZAMA Pipelines Limited. The objectives of the study were to:

1. Investigate the effect that Technology has on the implementation of Business Re-engineering process as implemented at TAZAMA Pipelines Limited
2. Assess the effects of individual skills and competencies in the implementation of Business Re-engineering process at TAZAMA Pipelines Limited
3. Examine the effects of challenges arising from the implementation of BRP at TAZAMA Pipelines Limited.

The study analyzed the demographics and the results based on the objectives found that TAZAMA Pipelines Limited, a Zambian oil pipeline company, was able to improve its performance after implementing a business re-engineering process. Furthermore, the study found that business re-engineering can be a valuable tool for improving firm performance. However, the following variables have been discussed:

5.1 Nature of Operations and Structure at TAZAMA

In terms of operations and structure, the respondents stated that TAZAMA has a functional reporting structure where departments report to a head of section and a functional directorate. With the BRP in process for three years running, there has been enhancement of the family culture structure that has promoted an open-door policy. The company has now streamlined its policies in line with the new mode of operations where structured manuals have been developed for the organization including those for systems and procedures. A lot of linkages have been established between the administration department, operations and engineering departments resulting in to a seamless process.

The fact that TAZAMA's Business environment is a highly regulated industry by the Energy Regulation Board there are moments where Government policy supersedes the

whole policy in as much as BRP would try to establish robust systems. The information department has now been restructured to support tasks across the organization and ensure work is carried out.

The introduction of business process re-engineering (BRP) at TAZAMA has had a substantial influence on the operations and entire structure of the organization. The BRP initiative has further enhanced this structure by promoting a -wide family culture and an open-door policy. This suggests a change for the better in all dynamics and the development of a more cooperative work environment.

TAZAMA has streamlined its rules and established structured documentation for systems and procedures to conform to the new operational style. This implies a proactive effort to ensure that regulations and practices are consistent with the re-engineered processes. It provides personnel with exact standards and instructions, fostering consistency and effectiveness in their work. On the other hand, the organization works in a highly regulated industry, and the policies may take precedence over legislative laws. This makes it tough to undertake BRP initiatives since the company must continually consider the regulatory environment and maintain compliance. The requirement to implement process changes while negotiating regulatory commitments complicates the BRP path.

The implementation of BRP at TAZAMA has also been impacted by the macroeconomic climate. For instance, the recent importation of finished petroleum products has led to more stringent security regulations and the demand for employees training on new procedures. This shows how outside influences can affect an organization's operations and force adjustments in response to market shifts.

The BRP implementation has also brought attention to the value of individual abilities within the business. TAZAMA employees need to upgrade their skills as processes change. Workshops and training sessions have been held to give staff members the knowledge and abilities they need to adjust to the new challenges presented by the re-engineered procedures. The expenditure on staff training shows a dedication to creating a skilled workforce capable of successfully implementing and maintaining the BRP reforms.

Several TAZAMA departments have been impacted by BRP, with operations, engineering and information technology being the most impacted. These divisions have a significant impact on how BRP activities are carried out and how systems develop. The teams from operations, finance, and information technology have been identified as having the greatest influence on change, demonstrating their active participation in the BRP process. BRP implementation at TAZAMA has, overall, resulted in improvements. Through reduced procedures, it has enhanced operational efficiency, generated a more trained workforce, and fostered an open and family-oriented culture within the company. To maintain long-term success, the business must continue to adjust to macroeconomic conditions while keeping an eye on the regulatory environment. Continuous investment in personnel up skilling will be necessary to keep up with industry developments and preserve competitiveness.

Age/Gender: The majority of the respondents were male which implies that the company is a male dominated industry. It was worth noting that despite the researcher herself being female, these statistics indicate that there was no gender bias in the data collection process.

The results imply that the respondents were a significant portion of the employees were relatively young, which implies that they may possess a better understanding of the latest trends in business process engineering. They were of mature age and very much responsible for the statements they made. Age matters in any research as it gives credence to the results according to Martinez, (1995) in his study about age of sample and its effect on free listing. A specific age demographic may share a cultural experience, values and attitudes that can help the researcher connect with the target audience.

Level of Education - The fact that the majority of the respondents had a university degree as a minimum imply that education is important because it means that someone has the specialized skills or knowledge that employers such as TAZAMA are looking for. The degree is always the opening window for employment for the kind of jobs that the respondents are doing at TAZAMA. But a degree alone is not enough without the experience as one respondent from the Engineering department had put it. The findings support their study about BRP and change management.

Further, the findings imply that education is important because it means that someone has the specialized skills or knowledge that employers such as TAZAMA are looking for which is an important factor in the determination of the success of the implementation of any change in any organization.

The degree is always the opening window for employment for the kind of jobs that the respondents are doing at TAZAMA. But a degree alone is not enough without the experience as one respondent from the Engineering department had put it. The findings support the findings of (Hammer & Champy, 2009) in their study about BRP and change management.

The majority of the respondents were working in the operations and engineering department. Respondents from other departments like finance, I.T and administration were not as much as those in the engineering and operations departments. These findings suggest that the majority of participants, particularly those from the operations and engineering department, were likely more familiar with the concept of business process re-engineering due to their job roles and responsibilities within the company.

Work Experience: The fact that the majority of the respondents where those that had been working with the company for between 5 to 10 years and represented just over half suggests that the company has employees who have fairly been stable and suggests a low attrition rate which is good for institutional memory. Tenure of respondents is very critical in retaining organizational knowledge. The longer one has been with the organization, the more they know and understand the operations of the organization and the more likely they will give accurate information in a study. Work experience or tenure is important because it tells the prospective employers about what a person can contribute to the. Work experience can provide a good match for a particular job. The findings agree with the findings by Ahmad, Francis, & Zairi, (2007) study that concluded that work experience had a positive correlation with work performance in an organization.

Effect of Technology on implementation of BRP AT TPL: The study's results demonstrate the significant influence technology has had on TAZAMA's BRP implementation. The study's respondents mentioned a number of ways in which technology

has helped the business run more efficiently. These results support earlier study on the connection between BRP and technology, highlighting the value of using technology to support efforts at process re-engineering. The improvement of infrastructure maintenance and monitoring is one significant area where technology has had a positive impact. TAZAMA has invested in cutting-edge technological technologies that make it possible to monitor its infrastructure more successfully. The company has seen a decrease in theft and pipe leaks as a result, which has saved money. This exemplifies how technology may improve operational effectiveness and contribute to the overall financial performance.

Furthermore, TAZAMA's internal and external reporting processes have been enhanced by upgraded IT systems. This has saved time and resources by streamlining the reporting processes through the use of technology. Additionally, reporting accuracy has been improved, which adds to the integrity and trust of the data shared with internal stakeholders and outside partners. At TAZAMA, we have seen a rise in staff motivation, which is another significant effect of technology. The new IT system's adoption has simplified employee tasks, making work easier for them to complete. Their motivation has increased as a result, which has increased output. According to the results, technology can contribute to the development of a positive work environment by giving employees access to tools that increase their productivity and efficiency.

Additionally, technology has enhanced organizational control and decision-making. The new IT system has made timely and reliable information more accessible, empowering management to decide wisely and exert better control over operations. For TAZAMA, this has led to increased productivity and financial success. The results highlight the significance of utilizing technology to improve decision-making procedures and obtain an edge in the market.

The results of this study are consistent with earlier studies, such as the one by Attaran & Attaran, (2018) which highlights how technology facilitates the re-engineering process. The benefits provided by technologies like document image processing and expert systems are highlighted by the authors. This supports the notion that businesses launching BRP initiatives ought to think about utilizing technical tools and systems to optimize the advantages of process re-engineering. Additionally, this study offers proof of the crucial

role technology played in TAZAMA's successful implementation of BRP. The results show how technology has strengthened decision-making and control, shortened reporting procedures, raised staff motivation, and improved infrastructure maintenance and monitoring. The overall effectiveness and profitability of the business have been positively impacted by these results. The study emphasizes how crucial it is to use technology to support BRP projects and how crucial it is for businesses to invest in the right technological tools in order to get the most out of process re-engineering.

The implementation of the current IT system has positively impacted the work of the participants at TAZAMA. Through the analysis of responses from 30 participants, it was found that the system brought about several significant changes.

One notable change is the adoption of ERP systems in all depots, enabling the convenience of online ordering and enhancing overall efficiency. This implementation likely streamlined processes and improved workflow within the company. Additionally, participants reported that generating reports became easier with the new IT system, indicating increased efficiency. Accessing relevant data also became more convenient, facilitating smoother information retrieval and analysis.

Moreover, the successful interlinking of the IT system with other departments has opened up possibilities for improved coordination, enhanced communication, and better data sharing across different functions within the organization. This integration is expected to foster synergy and facilitate a seamless flow of information between departments. Participants recognized advancements in technological processes, although specific details were not provided. However, it can be inferred that these technological upgrades have contributed to overall improvements in efficiency and effectiveness.

The implementation of the current IT system has had a positive impact on TAZAMA. The utilization of ERP systems, improved reporting capabilities, interlinking of systems, and technological process enhancements have collectively played a crucial role in enhancing the companies' operations and workflow.

The findings of this study are also consistent with those by (Evdokimova & Llyin, 2016) who found out that IT is an enabler to the re-engineered process, and any reengineering

program must take account of the tremendous advantage offered by technologies such as document image processing and expert systems. The results indicate that IT can be used to model and analyze business processes and then in reengineering those processes.

The findings about the responsiveness of IT in real time are consistent with the findings (Bradford & Burke, 2018) who concluded that BRP requires organizational restructuring with the help of simplification and standardization, and IT such as multimedia, internet, MRP II, CAD/CAE, electronic commerce (EC) and concurrent engineering (CE).

Furthermore, the successful interlinking of the IT system with other departments has opened up possibilities for improved coordination, enhanced communication, and better data sharing across different functions within the organization. This integration is expected to foster synergy and facilitate a seamless flow of information between departments. Participants recognized advancements in technological processes, although specific details were not provided. However, it can be inferred that these technological upgrades have contributed to overall improvements in efficiency and effectiveness.

The implementation of the current IT system has had a positive impact on TAZAMA. The utilization of ERP systems, improved reporting capabilities, interlinking of systems, and technological process enhancements have collectively played a crucial role in enhancing the company's operations and workflow.

Overall, the findings indicate that IT-driven initiatives play a significant role in facilitating change in the BRP project, aligning with the majority opinion among the respondents.

5.2.1 Satisfaction with Current IT Changes

The results collected strongly suggest that the implementation of BRP has indeed brought about significant transformations within the IT department. These changes encompass various aspects, including the introduction of new IT systems, process improvements, enhanced reporting capabilities, and other technological advancements. The positive responses from all participants indicate the successful impact of BRP on the IT department, demonstrating that the responses have effectively implemented changes to enhance IT operations and support business processes. However, further analysis is recommended to

gain a deeper understanding of the specific changes resulting from BRP in the IT department and their implications for TAZAMA.

The results of this study are in line with those of Childe et. (2014), who discovered that IT facilitates the re-engineered process and that every reengineering program must consider the enormous benefit provided by technologies like document image processing and expert systems. According to the findings, business processes may be modeled, analyzed, and then re-engineered using IT.

5.2.3 Skills and competencies

Regarding the results on skills and competences, were all the IT staff possess the necessary skills, the competences entail that skill development and training among staff members in various departments to effectively utilize the new IT process has worked for TPL. It emphasizes the importance of addressing skill gaps and providing necessary support to enhance the IT competencies. This agrees with the findings by Cunnington, Menter, & Chris (2017) in their study in Belgium Mines, where they concluded that individual skill and competence amongst the 400 respondents was a critical success factor in implementing the BRP in the mines after a series of accidents had occurred in the mining sector.

5.2.4 Structure and Functionality

Since it was found that the structure at TAZAMA is still shrouded in ambiguity the implication is that, it will be very difficult to have clear reporting lines between officers, because a good structure helps businesses implement efficient decision-making processes but having one such as was found existing at TAZAMA will create reporting problems not just now but in the future when the BRP project is completed. The findings are in conformity with the findings by Gasior, M., & Skowron, (2021) who concluded that a good working structure and well established organizational functions are critical to the success of any change management process and that by assigning specialized roles to lower-level employees, businesses can make better decisions faster as opposed to the findings in this current study

5.2.5 Top Management Commitment

Some of the respondents had mixed reactions regarding the commitment of the top management to the BRP Project. Over 45% (close to half) the respondents felt that management did not intensively involve all the stakeholders in problem identification and where worried that some of their departments may not see some of the positive effects of BRP because, they did not register their problems as departments. The respondents had hoped that they would on a department basis, hold meetings with top management to highlight some of the challenges, but the one meeting that was held for an hour was not enough to share the vision on the part of top management, to clear out some concerns from the affected staff and to provide guidance on the road map.

For a successful implementation of BRP, definitely top management like Managing Director, and Chief Operations Officer should have commitment over these reengineering efforts. One meeting held for an hour was critically not sufficient to succinctly address all the concerns that the staff may have had. Issues of staff redundancies, redeployment and involvement need more time and patience to be explained and understood. Top Management ought to have dedicated resources and time to meet all staff for briefings on a regular basis. First of all, top management should have assessed their situation and the organization's situation, and they should have come up with a position whether they are ready for reengineering or not at that point in time so as to reduce the level of resistance as was initially experienced at TAZAMA. Once they are ready, the top management should have identified the reengineering team if anything, appoint the team based on experience and level of effect with regard to changes to be made. By this, if say the Engineering department was to be the most affected with the changes to be brought about by BRP, management should have appointed key representatives from this department to drive the change process, these could be seen as change champions. This is as opposed to the way in which membership to the BRP implementing team was left to the staff to apply for and management only appointed a few top senior staff to the team. After putting up such a team, after subjection to situational appraisal, the team ought to have identified the required processes to be taken in the business process reengineering assignment.

The role of senior managers in reengineering efforts of the organization is very significant.

The findings in this study where top management had not been very engaging with the shop floor is central to the findings by Darmani & Hanafi Zadeh (2013) in Pakistan who studied the Oil Industry and concluded that in order to ensure critical success in the implementation of BRP, top management must identify senior managers to directly report to the CEO. In that way, top management commitment is assured and the vision is communicated effectively. In this study, the recommendations were that the top management has to identify the reengineering team where a member of senior management should head the reengineering team. Other team members like the reengineering experts should report to this senior management member.

In order to ensure commitment and participation, the reengineering team should have formed committees that could have been directly reporting to the CEO or head of process reengineering team. The other option would have been to appoint external consultants as suggested by Blaug, (2018) in their study done in Ethiopia in the Transport sector or as suggested by Bradford & Burke (2018) in the study on Change management across different manufacturing industries in the United States of America. The latter research suggested to have the Vice President of the Organization or Deputy Director level positions to head the business process re-engineering efforts in a bid to ensure commitment and remove the probability of ambiguity.

The findings of this study related to minimal top-level management – staff engagement and commitment contradict the findings of Mlay, Zlotrikova, & Watundu, (2013) who suggested that BRP is not for Minimal change but 10x change and should thus involve 100% top management and that the employees of the organization must be part of the process implementation stage.

Individual Skills - The findings of this study were that the lead engineer in the BRP implementation team lacked a holistic perspective by not engaging with other key stakeholders, lacked the persistence and creativity contradict the findings by Hammer & Champy, 2015)., who suggested that the business process reengineer should have the following profile:

1. Process–orientation
2. Holistic Perspective
3. Creativity
4. Restlessness
5. Enthusiasm
6. Optimism
7. Persistence
8. Tact
9. Team Player
10. Communication Skills

These skills of members of the BRP implementation team and more so that of the Lead member leads to the successful execution of business process reengineering assignments.

In the next section, we will see how the BRP team communicates with the stakeholders. The other critical element to effective BRP implementation is good communication both internally and externally with other stakeholders.

Communicating with Departments - The Re-engineering team seemed to have had challenges in the communication process. The fact that other department heads suggested that the key members of the team lacked good communication skills explains why some of the decisions were made were delayed to be relayed and implemented upon and also why the BRP assignment has taken longer than planned at TAZAMA. The members of the BRP implementation team should have good communication skills because they have to sell their ideas and the processes they redesigned to the outer world.

That is the BRP implementation team should communicate in time the work and redesigned processes to the employees of the organization for timely implementation purposes. This requires the project team to have strong communication skills. This is because while communicating the designed processes to the other employees of the organization, the project team may face resistance to change the employees, because of various reasons. Hence the BRP project team has to deal with these issues with care and diligence.

While communicating with the employees of the organization, project team should have kept in mind that the communication should be clear and unambiguous unlike the situation where at one point, a whole process had to be redone in the Engineering and production department, thereby wasting time and resources. It would have been better to make their point clear to the implementation department. In that particular instance, they should have taken into consideration, the human factors and soft issues while dealing with people.

Perhaps this was one way the implementing department was trying to show the BRP project team that they were not happy with the way things were being done for any reason at all. The BRP implementing team should from the very onset have made it clear that the BRP project was not about downsizing and layoffs or reducing head count, but was about process improvement and reducing cycle time, reducing turnaround time and improving profits.

If this was communicated to the employees of the organization before BRP assignment started, the employees could have bought in to the idea and such problems that point to resistance of change could have been avoided. Otherwise, the BRP team will face resistance from the employees as the before project close-out.

Stakeholder involvement is critical in the implementation of BRP. Employees are the first-line stakeholders who should be communicated to whenever critical issues concerning them are being discussed.

Hired Consultant - The interaction with consultants received a lower percentage of positive responses, with only 20% indicating a positive interaction while 80% showed that they did not have a positive interaction with the Consultant. This can mean a lot of things, some of which include that either, the consultant did not want to meet the staff members because of inadequate know how or there was a strong indication of some sort of resistance from the staff. This is evident from the fact that, the staff had called for a briefing on three occasions and only once did the consultants avail themselves to address the general members of staff. If the consultant was not willing to meet the staff for the first reason stated, there are many factors, which need to be taken into account while hiring an external consultant for BRP assignments and perhaps as one respondent had suggested, management may have

overlooked the most important factors- experience or technical know-how. The domain expertise experience level of the consultant, knowledge and awareness of BRP of the consultant play vital roles in selecting the consultant for BRP assignments.

Small organizations may opt to go for independent individual BRP consultants and the big organizations like TAZAMA may hire big consulting companies for assignments like business process re-engineering. In this case, for a company, the size of TAZAMA, a small consulting firm was hired. This may be the reason procedural or engagement issues were problematic and only 20% of the staff cited having some engagement with the consultant.

There are many reasons that cause failure of BRP in organizations. Maybe they have not correctly identified the processes to reengineer or they spent too much time on planning rather than implementing. Lack of commitment from senior managers as has been said already can be another cause of failure of business process reengineering in the organization or they lacked experienced BRP consultant as observed in the study by (Al-Mashari, Irani, & Zairi, 2001) who studied companies across three different sectors implementing BRP in the United States of America.

Consultants that fail to study the current processes in place in the organization before going for redesigning the processes, then fail to engage or communicate the results to the employees for implementation purposes would end up failing or delaying the project completion. This is because they would face a myriad of obstacles including rejection by staff, contributing to cost overruns and general implementation fatigue.

5.3 Challenges faced by BRP at TAZAMA

Participants in the study noted a number of difficulties with the Business Process Re-engineering (BRP) implementation at TAZAMA Pipelines Limited. These difficulties bring to light areas that need improvement and attention to guarantee the BRP's successful implementation. The difficulties that have been highlighted include poor feedback, top-down leadership, poor communication, and worries about job instability.

When implementing BRP or any other change process, effective communication is essential. Strategic planning and performance reviews, according to the study's

participants, were not properly conveyed throughout the company. This breakdown in communication can cause uncertainty, resistance to change, and a misalignment between individual duties and organizational goals. TAZAMA should concentrate on developing various communication strategies, such as in-person meetings, newsletters, and email updates, to deal with this issue. The management may guarantee that information is successfully communicated to all staff members by leveraging numerous channels, encouraging transparency and engagement.

The perception of top-down leadership was a notable problem. The respondents believed that the top leadership had not adequately explained to the rest of the personnel what BRP's core goals were. TAZAMA should take a more bottom-up leadership stance to deal with this problem by incorporating the workers in decision-making and getting their feedback. This inclusive strategy enhances employee empowerment, supports ownership of the changes, and fosters a sense of shared accountability for BRP's success.

Additionally recognized as a problem during the BRP deployment was inadequate input. The respondents stated a need for opportunities to offer their input as well as a need for regular updates on the status of BRP. TAZAMA should set up a feedback system that enables personnel to be informed about changes, ask questions, and offer comments in order to address this issue. To gather input and make sure that staff members feel involved and appreciated in the process, workshops, meetings, and questionnaires can be employed.

Some respondents expressed anxiety about job uncertainty. Change initiatives like BRP frequently cause uncertainty and concern about the stability of one's employment. TAZAMA should take action to solve this issue by putting initiatives in place to improve job security. Offering staff member’s opportunities for training and development gives them the tools they need to adjust to change and reflects the company's dedication to employee development. Offering severance compensation to employees who could be let go as a result of BRP can also assist allay fears and provide a safety net throughout the transition.

The difficulties encountered when implementing BRP at TAZAMA Pipelines Limited also serve to emphasize the value of effective communication, participate leadership, consistent

feedback, and managing job insecurity, considering BRP can lessen these difficulties and improve the possibility of a successful implementation by following the advice given. To enable a smoother transition, encourage employee participation, and maximize the benefits of BRP, TAZAMA should proactively address these issues.

5.4 Handling of Challenges at TAZAMA

The suggestions made by the respondents provide useful information for streamlining the difficult process of implementing BRP. More time set aside for planning during the planning phase enables thorough data collection, analysis, and plan preparation. More worker participation in the planning stage encourages buy-in and support for the suggested modifications since it makes users feel appreciated and ownership over the process. Additionally, by establishing key performance indicators (KPIs) early on, firms can gauge the BRP process' effectiveness and monitor progress toward intended results.

Workers must be involved in the implementation process and given a voice. Staff may learn important lessons, resolve user issues, and ensure a smooth transition by incorporating users in the process. Using a phased approach enables iterative learning and alterations when the improvements are put into practice. Users can adjust to the new system, get past obstacles, and increase their productivity during the shift by receiving training and support.

Continuous improvement is crucial after installations may maximize the advantages and rectify any gaps or deficiencies by monitoring the results of the BRP process and making adjustments as necessary. The BRP process is continually reviewed to ensure that it remains in line with the changing demands of the business and to offer possibilities for improvements that can compared to actual results to anticipated outcomes, pinpoint areas for development, and make required adjustments by taking variance analysis into consideration. A culture of continuous learning and innovation is also fostered by incorporating users in ongoing improvements, ensuring that the changes are long-lasting and in line with user pleasure. In conclusion, putting the respondents' recommendations into practice can greatly improve the efficacy and success of BRP projects. Employees can maximize the results of their BRP initiatives by allocating enough time for planning,

involving users throughout the process, using a staged approach, offering training and assistance, encouraging continuous improvement, and incorporating users in ongoing developments.

5.5 Summary

This chapter has discussed the findings from the study and made reference to the findings in other studies that were reviewed in chapter two- Literature review. The chapter looked at the importance of Individual skill and competence, the Structure and Functions and related them to BRP implementation as it is being done.

CHAPTER SIX: CONCLUSION AND RECOMMENDATIONS

6.1 Introduction

This chapter gives a summary of the findings, discussions conclusions and recommendations.

6.2 Conclusion

In this section, the results of the study as discussed are concluded aligned with the research objectives. One of the objectives of this study was to establish the impact of BRP on firm performance. The results show a positive impact on performance. An assumption that is being made by the researcher is that although they could be other factors that could have resulted in increase to performance, for the sole purpose of the study implementation of BRP by TAZAMA majorly contributed to this increase in performance.

As asserted by Addolvand, Albadvi, & Fedowsi, (2008) BRP efforts represents an organization commitment of millions of funds for redesigning internal processes, changing fundamental product delivery and customer service procedures and often reexamining and repositioning corporate strategy.

The study concludes that work culture and organizational structure at TPL have been one of the main challenges in the effective implementation of the BRP project.

The implication of the culture on non- engagement makes staff feel left out in most decisions and actions that are being done at TPL to a point where it can lead to outright resistance to change by the staff. Cooperation and less resistance to change can be ensured if people are actively involved in the process of BRP.

Despite the low level of engagement between the management and the staff during the BRP implementation project, the study concludes that employees at TAZAMA are very much committed to BRP implementation. BRP implementation can be predicted by employee commitment and motivation However, the study also concluded that there is room to further motivate employees to be more involved especially in the area of implementation which has been mainly confined to the BRP project implementation team

The implication of the broad organizational structure will cause more bureaucracies in the implementation of the BRP project

However, the research study concludes that TAZAMA had very good Information Technology to drive the BRP project and the majority of staff agrees that Information Technology has enhanced the implementation of BRP.

A further conclusion was made regarding the role of financial resources on business process re-engineering implementation in TAZAMA. The study concludes that there have been adequate financial resources provided for the project. This is one of the critical success factors.

6.3 Recommendations

The study makes the following recommendations:

6.3.1 Human factor

The ultimate fate of business processes is determined by the human factor. Although senior management is obviously more involved at the beginning of a re-engineering effort, the employees of an organization need to carry it out. A change in mindset, work culture and attitudes of personnel in a firm result in positive performance in the firm. Before executing the BRP plan, it is vital to explain to the affected parties why the redesigning effort is necessary .The input of employees in regard to customer preferences process, market and feedback could be acquired.

The confidence and morale of those participating will be boosted further by giving instructions on how to utilize the processes that have been revised.

This reform should also involve all stakeholders, including customers, suppliers and others, they should all be informed and their inputs should be captured.

The BRP team should be planned early and controlled in order to tackle such people centric situations which also warrant ample attention.

6.3.2 Business Strategy

The strategy of company acts as the overall master plan for all its operations. It provides a long-term perspective on the company's objectives. It offers a futuristic road maps, established objectives and regulates work to take advantage of opportunities. The new role that TAZAMA has assumed after the reconfiguration of Indeni Oil refinery to an Oil marketing company has itself initiated a new business strategy which by all means should:

- Build a framework for decision making and setting clear boundaries. Strategies to manage process accountability, customer preferences for the product (low Sulphur diesel or unleaded petrol), market trends, monthly price adjustment cycles for fuel prices and process functionalities need to be reassessed and redesigned.
- Conventional approaches will have to be abandoned and reinvented using lessons learned from prior experience.
- Initiating productive processes for generating new models and to be in place, an exhaustive updating of strategy is imperative.
- While the provision of storage helps monitor terminals and redeployed items for incorporating those from any external sources and accounting, top management responsible for strategic decisions should exercise imagination and vision with motivation to accomplish a new restart for the company.
- As the motto of BRP states, A radical change to attain a quantum leap in the business, strategic decisions should be improved following in-depth identification and rigorous examination

6.4 Limitations and Areas for Further Research

The study encountered a limitation of low response rate from participants. The researcher had to send kind reminders to the participants to enhance response rate. It was not possible to take a larger sample of respondents due to time and financial constraints. However, regardless of all the effort, the response rate for the study stood low at 90%.

6.5 Suggestion for Further Research

This study focused on TAZAM and the application of business processes in the Energy Industry. Other studies may seek to develop the business process re-engineering that was utilized in this study by testing it in a new industry, location or nation to guarantee the models robustness in various circumstances. Other scholars could additionally include mediating moderating factors in the model, such as enabling conditions and economic issues. The researchers that future studies need to focus more on how to improve BRP in a challenging business environment, with one vital element of the monthly gasoline price adjustment policy that has been put in place.

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APPENDICES

Appendix 1: Questionnaire

AN ANALYTICAL REVIEW OF BUSINESS RE-ENGINEERING PROCESSES ON THE EFFECTS OF FIRM PERFORMANCE: A CASE OF TAZAMA PIPELINE LIMITED

Instructions

This questionnaire is to solicit information to aid the researcher in getting data to achieve the objectives of the study. Strict confidentiality and anonymity will be maintained in the research. Kindly indicate your response by a tick (√) or a cross-mark (**x**) in the appropriate box, representing the most appropriate answer. Thank you in advance for participating!

SECTION A: DEMOGRAPHIC DETAILS OF RESPONDENTS

1. **Indicate your gender** Male ☐ Female ☐
2. **Age**

20-29 years ☐ 30-39 years ☐

40-49 years ☐ 50 years and above ☐

3. **Highest level of education attained**

Secondary education ☐ Diploma ☐

Bachelor's Degree Master's degree ☐

Other (Specify)_____

4. **Department**

Operations ☐ Finance ☐

Engineering ☐ IT department ☐

5. **Tenure at TPL?**

Less than 3 years ☐ 3-5 years ☐

5-10 years ☐ above 10 years ☐

SECTION B: CURRENT STATE OF BRP IMPLEMENTATION AT TAZAMA PIPELINES LIMITED

6. In your opinion, do you agree that TPL has to a large extent implemented business re-engineering processes?

Strongly agree [ ] Disagree [ ] Neutral [ ] Agree [ ] strongly agree [ ]

7. Do you agree that the current state of implementation of BRP at the TRP is highly satisfactory?

Strongly agree [ ] Disagree [ ] Neutral [ ] Agree [ ] strongly agree [ ]

8. To what extent has TPL implemented the following aspects of BPR where you can indicate the extent to which you agree by ticking or cross-marking the box with the number that corresponds to your answer using the scale: **1= Strongly disagree; 2 = Disagree; 3 = Neutral; 4 = Agree and 5 = Strongly agree**

BRP implementation	**1**	**2**	**3**	**4**	**5**
TPL has a vision statement on business process improvement					
TPL has selected core business processes having high impact on customers					
TPL has implemented re-engineering processes in line with objectives of the company					
BRP initiatives are have been or being implemented as per plan					
TPL has a strategic plan on business process improvement					
TPL has done reverse engineering by identifying failures in the existing processes					
The firm has spent considerable investment in effecting change management					
TPL operations and systems have been automated					
BRP initiatives have been aligned with existing organizational culture					

SECTION C: EFFECT OF BRP IMPLEMENTATION ON PERFORMANCE OF TPL

9. In your rating, do you agree that BRP implementation has impacted overall performance of TPL over the past five years?

Strongly agree [ ] Disagree [ ] Neutral [ ] Agree [ ] strongly agree [ ]

10. In what ways has BRP implementation impacted overall performance of TPL?

Negatively [ ] positively [ ] No effect [ ]

11. To what extent to you agree with the following statements relating to BRP implementation and firm performance of TPL by ticking or cross-marking the box with the number that corresponds to your answer using the scale: **1= Strongly disagree; 2 = Disagree; 3 = Neutral; 4 = Agree and 5 = Strongly agree**

Through BRP implementation, over the past five years, TPL has:	**1**	**2**	**3**	**4**	**5**
Realised positive growth in profit margins					
Generated more revenue					
Experienced increased market share and competitiveness					
Realized improved quality service delivery					
Realised increased customer satisfaction					
Improved operational efficiency and effectiveness					
Increased Return on Investment (ROI)					
Realised significant decline in costs of operations					

12. In what other ways has BRP implementation influenced performance of TPL?

……

……

……

SECTION D: FACTORS INFLUENCING EFFECTIVE IMPLEMENTATION OF BRP AT TPL

13. In your view, do you agree that there are factors influencing effective implementation of BRP at TPL?

Strongly disagree **[ ]** Disagree **[ ]** Not sure **[ ]** Agree **[ ]** Strongly agree **[ ]**

14. Below are some of the factors influencing effective implementation of BRP at TPL where you can indicate the extent to which you agree or disagree with the statement by ticking or cross-marking the box with the number that corresponds to your answer using the scale: **1= strongly disagree; 2 = disagree; 3 = neutral; 4 = agree and 5 = strongly agree**

Factor influencing BRP implementation	1	2	3	4	5
Lack of IT supporting infrastructure					
Resistance to change by employees					
Inadequate training of employees					
Lack of stakeholder involvement in BRP implementation					
Lack of financial, technical and skilled human resources					
Lack of top management support and commitment					
Lack of effective communication					
Poor organisational culture					
Lack of awareness among key stakeholders					
External environment (political and macroeconomic environments)					

15. What are other factors influencing effective implementation of BRP at TPL?

……
……
……

How has BRP affected the film performance of TAZAMA Pipe line?

6. Can you briefly describe the nature of TAZAMA in line with the following?
   - Operations-
   - Structure-
   - Culture-
   - Policies-
   - Business environment-

7. Can you please describe the nature of your work? (State clearly which department it is:

- Operations-
- Engineering-
- Finance-
- Administration-
- Specify any other department-

8. How has the macro-economic environment factors affected the implementation of BRP In your department?

- Operations -
- Engineering -
- Finance -
- Administration -
- Specify any other department –

How have the individual skills as staff of TAZAMA affected the implementation of BRP in your department?

9. Which department is affected by virtual of the implementation of BRP?

- Operations –
- Engineering –
- Finance –
- Administration –
- IT
- Specify any other department -

10. In the BRP project, which group of people exerts the most influence in bringing about change?

- Operations team
- Engineering team
- Finance team
- Administration team
- IT team
- Specify any other department

11. Do each of the staff in every given department possess the right skills to operate using the new IT process?

How has Technology affected the implementation of BRP at TAZAMA?

12. Have there been any new changes brought about by BRP in the IT?

13. Has the introduction of the current IT affected the way you used to work? Explain briefly in what ways?

14. Are you satisfied with the current IT changes? Please justify and give examples

15. On scale of 1 to 10 how would you rate user friendliness and effectiveness of the current IT system?

16. Explain the differences between the previous IT system and the new system

What Challenges does TAZAMA have in the implementation of Business Re-engineering process?

17. How is the creating acceptance to change in terms of the following?

- Training programs initiated
- Performance of Training in BRP effort communication Process
- Strategic Planning
- Performance appraisal

  (1 = not to good) (5= extremely well)

18. In this BRP Project, is IT considered to be the main factor that enables change to be carried out? Please explain (Please stress: IT driven?

19. What role has the top management played in this change initiative in terms of?

- Change management
- Leadership

20. Have you noticed any changes in the following as a result of the introduction of the BRP project?

- structure
- Communication
- Work culture
- Process

21. Has the transition team met with other governmental agencies and private businesses to learn about the successful ways to plan workforce redeployment, retraining, and cost reductions?

- GRZ
- UNION
- Consultants
- Counsellors
- Specify any other agencies

What are the options to handle the challenges and issues identified so as to take advantage of the prospects arising from the implementation of BRP?

22. What are the suggested options from each department identified so as to take advantage of the prospect arising from the implementation of BRP?

- Finance department
- Engineering department
- IT department
- Top management team
- Middle management team
- Specify any other department.

22. Any other Impression that you wish to make mention concerning the solutions to be considered at any interval?

- During the planning Period
- During the implementation process
- After implementing the BRP process.

THE END

THANK YOU FOR YOUR TIME!!!!

Appendix 2: Interview Guide for Top Management

1. **Biography Data**
    a. The department one is managing
    b. The position one holds
    c. The number of years in that position
    d. The exact job description in that department
    e. What is your highest qualification?
2. **How has BRP affected the film performance of TAZAMA Pipe line?**
    a. Share your general impression how BRP has affected the general performance of TAZAMA both in a positive and negative way.
    b. Any other contributions?
3. **What effects does technology have on the implementation of BRP at TAZAMA?**
    a. Are you acquainted with the new IT system in the department
    b. How many are conversant with the new IT in your department?
    c. How many seem to struggle in your department to incorporate the use of the new IT system this far.
    d. Any other additional information you wish to share concerning the current its system in comparison with the old one.
4. **How have the individual skills by staffs affected the implementation of Business Re-engineering process at TAZAMA?**

a. Does all the staff that you are supervising have the write skills according to their job description?
b. How has the implementation of BRP affected the operation of each staff member in their area of specialty?
c. Any other impression on the skills affecting the implementation of BRP at TAZAMA.

5. **What Challenges does TAZAMA have in the implementation of Business Re-engineering process?**

a. What are the identified challenges by management at TAZAMA which have emerged due to the implementation of BRP?

b. What role has the top management played in this change initiative in terms of?

- Change management
- Leadership

c. Any addition on the challenges

6. **What are the options to handle the challenges and issues identified so as to take advantage of the prospects arising from the implementation of BRP?**

a. How can these challenges be alleviated

b. . What strengths can be considered to be taken advantage of in the bid to get rid of the identified challenges?

c. Any more contribution on the way forward with the identified challenges.

7. Anything more to add on?