

**FAILURE FACTORS FOR BUSINESS PROCESS
REENGINEERING: A CASE STUDY OF KENYA PETROLEUM
REFINERIES LIMITED**

BY

GACHAU MICHAEL KARIUKI

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DECLARATION

This research project report is my original work and to the best of my knowledge has not been presented for the award of a degree in any other university.

GACHAU MICHAEL KARIUKI

D61/61072/2011

Signed

Date

This research project report has been submitted for examination with my approval as the University supervisor.

STEPHEN ODOCK

Lecturer, Department of Management Science,
School of Business,
University of Nairobi

Signed

Date

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DEDICATION

I dedicate this work to the three girls in my life, my wife Mary, whose love and support has been enormous, my two lovely daughters Chelsea and Kayla, the gems that bring light to my life. I Love you girls.

ABSTRACT

The business world of today is very dynamic, changing very rapidly with the global expansion trends and customer's needs and expectations equally changing at a very fast rate. Business process reengineering has been implemented by many organizations in order to meet the demands of today's business world and remain competitive. However, many of these endeavors fail to realize their goals and many scholars like Champy (1995), Cao et al. (2001), Marjanovic (2000) among others report that as many as 70% of BPR efforts fails to meet their goals. Kenya Petroleum Refineries Limited implemented a BPR project dubbed 'Merchant Mode' and this project did not meet the expected goals. This research study sought to find out the factors that contributed to the failure of merchant mode project at KPRL and the challenges that were encountered during the implementation of the project. The findings were based on data collected by means of questionnaires administered to employees across all functions. Twelve respondents were targeted in three levels which included two top management members, six middle management members and four supervisors. The study found out that the failure was contributed by a combination of factors rather than a single factor. Literature has emphasized the importance of the linkage between IT tools and system with BPR and KPRL did not adequately invest in a proper system to manage the change. The IT system was required right from the early stages of BPR implementation and the project team needed proper and adequate induction into the application of the IT tool for effective implementation. In addition, the study concluded that though the employees had the determination to see the BPR succeed, they lacked crucial skills and knowledge of embracing the new processes. This was caused by lack of adequate training, poor communication and poor change management which did not effectively change the organization culture and this was manifest in their strong commitment to existing processes. The study also found out that the implementation of the project was faced by a number of challenges. The main challenges were lack of proper information technology tools and system, poor communication and sensitization to employees, and a strong employees' commitment to old process. Other challenges cited included a low focus on the needs of the customers, the desire to change not being strong enough, inadequate training on the project and also some external political interference. The study has confirmed the prior findings of other researchers that BPR project before execution needs deployment of success factors such as preparation for change, planning, recognition and design, evaluation, culture and change, and information technology for them to be successful.

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ABBREVIATIONS AND ACRONYMS

BPR	-	Business Process Reengineering
COBRA	-	Constraints, Opportunities, Business, Restructuring, and Analysis
CSF	-	Critical Success Factors
KPA	-	Kenya Ports Authority
KPRL	-	Kenya Petroleum Refineries Limited
IPG	-	Informatics Process Group
IT	-	Information Technology
LN	-	Legal Notice
LPG	-	Liquefied Petroleum Gas
OMC	-	Oil Marketing Company
PADM	-	Process Analysis and Design Methodology
TQM	-	Total Quality Management

CHAPTER ONE: INTRODUCTION

1.1 Background of the Study

The business world of today is very dynamic, changing very rapidly with the global expansion trends. Customer's needs and expectations are equally changing at a very fast rate and this calls for any organization to change if it has to remain in competition, and sometimes the change is necessary for its survival. Hesson et al. (2007) argue that operational efficiency has become a major concern for many organizations and the traditional management tools and techniques can no longer help enterprises in new circumstances. The organizations need therefore to focus on the development of more flexible, coordinative, team and communication based capabilities. Hammer (1990) introduced Business Process Reengineering (BPR) as a tool to bring radical changes in the business processes. BPR is said to be a new approach for process management that brings radical change in organizational performance and Hammer and Stanton (1995) viewed it as a replacement for total quality management (TQM) when it was initially adopted. The risks involved and failure rates associated with BPR projects are very high. Cao et al. (2001) estimates it to be as high as 70% and Marjanovic (2000) found the failure rate of BPR project to be more than 70%.

BPR gained much recognition in the early 1990s and the concept was widely developed by practitioners. Due to the pragmatic standpoint, Simon (1994) observes that that theory development of BPR has been rather thin. BPR however can be closely linked to combined application of theories and concepts mainly from three areas, one being

marketing where the concern is theories on competitive advantage, customer focus, industry value systems and value adding chains. Second area is on organization theory in the broad sense, including the aspects of human resource management and organizational strategies and lastly in the area of informatics or the use of IT for supporting process-based organizations by using appropriate information architectures and systems (Simon, 1994).

Kenya Petroleum Refineries Limited implemented a BPR project dubbed 'Merchant Mode' with an aim of achieving dramatic increase in its performance and meeting customers' expectations of speedy and efficient delivery of products and services. The project was not successful and this study aims to analyze the factors that contributed to the failure and the challenges KPRL faced during the implementation.

1.1.1. Business Process Reengineering

The concept of BPR has been defined using various terms. Hammer and Champy (1993) refers to BPR as the fundamental rethinking and radical redesign of business processes to achieve dramatic improvements in critical, contemporary measures of performance, such as cost, quality, service and speed. Alter (1990) defines it as a methodical process that uses information technology to overhaul business process radically and so as to realize major business goals. Davenport (1993) put it as the radical redesign of broad, cross-functional business process with the objective of order of magnitude performance gains, often with the aid of Information Technology. In all these definitions, BPR has been highlighted as a radical redesign of business processes with an aim of achieving significant improvements in performance.

The definition of BPR by Hammer and Champy (1993) contains four key words. These are; fundamental, radical, dramatic and process. Fundamental rethinking calls for people to rethink about the most basic questions about their organization and how they operate. Radical redesign calls for changing completely the old way of doing business and the change is dramatic. They argue that BPR concept is about business reinvention and not business improvement, business enhancement, or business modification. The fourth keyword is processes. A BPR project requires the organization to be process-oriented rather than focusing on tasks, jobs, people or structures. The departments in an organization need to work together with a focus on the final product rather than each department focusing on its own task.

BPR concept is not about making marginal or incremental improvements but about achieving drastic and dramatic performance. Where marginal improvement is desired, other process improvement tools like just-in-time and total quality management, lean operations, and others may be used. This sets the clear difference between BPR projects and the other process improvement tools. Hammer and Champy (1993) outlined this requirement by stating that the companies that need BPR are either those companies that find themselves in deep trouble hence they have no choice, or companies that are not yet in trouble but whose management has the foresight to see trouble coming, or companies that are in peak condition and they have no discernible difficulties, either now or on the horizon, but their managements are ambitious and aggressive. Goksoy et al. (2012) considers BPR as a strategic tool for organizational change. He referred the business

environment as hypercompetitive and stated that a firm needs to bring moderate change every year and undergo a major change almost every fifth year if it wants to survive.

Tharanga (2010) observes a number of benefits for undertaking a BPR project. A company running at a loss could be turned around by a BPR project and be saved from extinction. BPR could enhance the profitability of the company by reducing cost and leading to higher income generation. BPR project aims at achieving improved product quality and enhanced service delivery and speedier delivery, all of which results to customer satisfaction. He also notes that BPR is not without drawbacks. BPR is a costly process that requires huge investments. The implementation of a BPR project is quite time consuming as it takes considerable amount of time to plan and design properly. For a successful implementation and monitoring of a BPR project, experts are required and in most cases, such expertise is not easily available (Tharanga, 2010).

Champy (1995) reports that BPR efforts are failing to meet their goal at a rate of 70%. Commenting on this statistic, Mayer and DeWitte (1999) observed that an organization would have to be facing critical business issues or have considerable problems warranting it to attempt the high-risk, highly visible BPR project, given these significant chances of failing. Mayer and DeWitte (1999) highlighted three primary reasons attributed to failing BPR efforts. First reason is the lack of an adequate business case resulting in unclear, unreasonable, or unjustifiable expectations for what is wanted or expected to result from a BPR effort. The second reason is the absence of robust and reliable technology and

methodologies for performing BPR project so that there is a failing in executing BPR efforts. The third reason is an incomplete or inadequate implementation.

1.1.2. Kenya Petroleum Refineries Limited

Kenya Petroleum Refineries Limited is East Africa's sole refinery processing crude oil for the region. The Company was incorporated in 1960, under the name East African Oil Refineries Limited and is currently owned on a joint venture of 50:50 between the Government of Kenya and Essar Energy Overseas Limited. The company refines crude oil from Middle East into five main products, LPG, motor gasoline, kerosene, automotive gasoil and fuel Oil. According to Petroleum Insight (2012), KPRL plays a very important role in the country. It is a strategic national asset that refines crude oil on behalf of more than 70 oil marketing companies (OMCs) in the country and providing 40% of the Kenya's total petroleum demands. KPRL provides employment to more than 1000 permanent and contract staff and is one of the major organisations in the coast province contributing positively to the economy of Mombasa and Kenya at large.

Since its commissioning in 1963, the refinery used to operate under 'toll mode'. This is a processing mode whereby the oil marketing companies would import crude oil, deliver it to KPRL and take the products after processing. The company's newsletter (KPRL, 2012) highlighted that KPRL did not own the crude oil or the products and only used to charge processing fee after converting the crude oil into products. Based on the Kenyan law reports (Legal Notice 24, 2012) the OMCs are required by law to process a minimum of 1.6 million tons of crude oil at the refinery and share the products as per their market share. Due to the legal protection, KPRL's revenue was therefore guaranteed. However,

the processing fee set many years back remained constant despite the ever increasing cost of production. In addition, the OMCs, KPRL customers, were complaining due to high processing losses and attributing the high fuel prices at the pump stations to inefficiencies of KPRL. Hammer and Champy (1993) argues that one of the reasons an organization will undertake a BPR project is due to pressure from external environment. KPRL faced pressure from its customers to improve on its processes and hence undertook the merchant mode project. The objective was to increase its revenue by its anticipated improved processes and at the same time meet customers expectation of speedy delivery of products (KPRL, 2012).

The Merchant Mode involved a shift from the tradition tolling mode. KPRL would buy the crude oil directly, process and sell to its customers, the oil marketing companies (KPRL, 2012). One major characteristic of BPR as brought out by Hammer (1990) is the combination of several jobs into one, and Hammer and Champy (1993) highlighted the characteristic of BPR as performing work where it makes more sense and this is what the merchant mode aimed. Davenport (1993) argue that BPR projects require high reliance on IT so as to achieve drastic changes and KPRL invested on IT software to aid in crude oil receipt, product distribution and reconciliation products for the 70 plus OMCs and a system linking all departments from finance to Operations to sales. This conversion also entailed absorption of the previous risks previously covered by the OMCs for buying and transporting crude, inventory management and other dynamics involved in sourcing, processing and selling of refined products (KPRL, 2012).

The conversion involved a total turnaround where even the organization culture also needed to change and employees needed to focus on generating revenue unlike in former set-up where revenue was guaranteed. Adequate training of personnel and engagement of experts was required. BPR projects are expensive (Davenport, 1993) and this proved so by KPRL investing in expensive and sophisticated IT software through upgrade and customization of previous infrastructure to fit in the merchant mode, borrowing a working capital of more than 350 Million US dollars from banks and increasing its manpower strength through hiring more. KPRL enhanced its process by investing in new expensive captive power plant aimed at increasing plant availability hence process effectiveness and efficiency.

The implementation of Merchant mode did not bring drastic performance improvements as expected. Hammer (1990) highlights reduction in cost as a measure of performance and KPRL's operating cost increased considerably leading to a reduction in cash generated from operating activities by over 103% (KPRL, 2013). First, the Captive power plant did not operate due to un-anticipated performance issues and the financing cost and interests added to the operating costs despite the plant being idle. Stoner (2001) highlighted profit maximization as a major objective many business firms and that BPR projects aim at achieving firms objectives and since implementation, the financial position worsened as per the financial statements of KPRL, the total comprehensive income reduced by over 182% to register a loss despite the fact that the benefits of the BPR projects were expected to be immediate. Farmer (1993) brings out customer satisfaction as a key determinant of BPR project meeting its objective and hence being

successful. The OMCs found the new process to be cumbersome due to the extra steps introduced before the products could be released from KPRL, making the entire process take more than twice longer time than before (KPRL, 2012). The accounting of the product and allocations to OMCs was also a challenge as the implemented IT tool had challenges of incompatibility with previous systems. This in effect increased the workload to employees who had to manually transfer data from one system to another.

KPRL implemented the merchant mode BPR project and based on the measures of performance of cost, speedier delivery, quality services and improved performance (Hammer & Champy, 1993) and the project was not successful. This research aims at looking at the project that KPRL implemented with an aim of analyzing the factors that contributed to the failure and the challenges it faced during implementation.

1.2. Research Problem

The business dynamics of today's world is complex and is being governed by factors like new technologies, new competitors and new rules of competition. These dynamics call for flexible, dynamic business processes that give organizations the agility to respond to the changing environment. Farmer (1993) noted that BPR is essential to delight the customer rather than just satisfying them and to move at par with the best practices prevalent in the industry. Tharanga (2010) highlights that organizations undertake BPR in order to stay alive. They need to do so in order to bring the much needed innovations to change their outdated business technologies and processes without which they would die.

KPRL is the only petroleum refinery in East Africa. For almost 50 years since its commissioning in 1963, it used to operate on tolling mode, relying on government's protection for its capacity by enforcing the OMCs to process at KPRL. With no obligation to losses or poor performance, coupled with guaranteed revenue, KPRL had no incentive to continually improve its performance or please its customers. With almost constant revenue but ever increasing cost of production, KPRL's income was dwindling year after year. The OMCs on the other side were unhappy processing at KPRL and absorbing all the losses. It is with this background that KPRL undertook the merchant mode project anticipating increased income, satisfied customers and satisfied employee. KPRL realized the opposite and suffered losses in operations with cash generated from operations reducing by over 103% (KPRL, 2013) within one year. Champy (1995) observed that about 70% of BPR projects fail and hence this study aims to evaluate the key failure factors of BPR projects and in reference to KPRL.

Many studies have been carried out worldwide on BPR, its implementation and outcomes and most of the studies recorded focused on BPR projects that have succeeded. Kamhawi (2008) found out that the existence of some organizational capabilities such as effective project management experiences and the ability to build an organizational-wide need for change are important requisites to gain positive salient beliefs toward accepting BPR. Khong and Richardson (2003) concluded that critical success factors (CSF) of BPR implementation have positive effects on banking and finance enterprises in terms of customer service management. Kaptoge (2008) observed that Wrigley Company gained competitive advantage by implementing BPR. Owino (2009) found out that most of BPR

projects in Kenya are carried out before the main success factors highlighted in literature are considered and recommended that the management of organizations should not engage in BPR projects before analyzing the success factors that should be in place.

Momanyi (2012) also focused on a BPR project implemented at KPRL. The project was 'Maximo' asset management system which supports all aspects of plant maintenance, analyzing failure reports and incident reporting, inventory management and job tracking. He found out that by implementing this system, KPRL improved the material requisition time which resulted in cost reduction on maintenance activities and inventory management. He identified communication about the importance of the project as a major challenge to its implementation. The merchant mode study under consideration is a different process and of a wider scope and happened a year after the successful commissioning of the project that Momanyi (2012) studied.

A number of other researchers highlight the importance of focusing on the key success factors for any BPR project to be successful. Despite the significant growth of the BPR concept, Champy (1995) estimate that as many as 70 percent do not achieve the dramatic results they seek and KPRL contributed to this worrying trend. This study sought to answer the following questions. What are the factors that led to the failure of the merchant mode BPR project at KPRL? What are the challenges that KPRL faced while implementing the merchant mode project?

1.3. Research Objectives

This research aimed to achieve the following objectives;

- i. To establish the key failure factors of the merchant mode project at KPRL.
- ii. To determine the challenges faced by KPRL while undertaking the merchant mode project

1.4. Value of the Study

This study is expected to review all the factors for consideration before, during and after implementation of any BPR project and the findings will help the management of KPRL to understand which factors contributed to the failed project and lessons learnt will also be useful in its future BPR projects. The findings from the study may be of practical use to other decision makers in organizations considering undertaking BPR projects.

The contribution of the study to theory for researchers and academicians is manifold. It is expected to add more insight into the pool of knowledge available on BPR particularly on the factors contributing to high rate of failures of BPR projects, acting as a future reference material for further studies on BPR and other areas of operational management. The study provides key lessons that academicians and researchers can expound on in understanding the key success and failure factors for BPR projects.

The study should also be able to contribute towards sound and more informed decision making on issues of BPR by policy makers in organizations and public institutions. Loopholes unearthed by this study would be avoided in future projects hence contributing to successful BPR projects in future. The reported rate of failed BPR projects is very high and as more and more research findings are available, this rate of failure is expected to come down.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

This chapter looks at literature on BPR. First, it looks at the theoretical review of BPR methodologies and BPR and performance. The chapter then explains the research done on key success and failure factors of implementing BPR together with the methodologies as discussed by various authors. Finally, it looks at the empirical studies carried out on BPR.

2.2. BPR Methodologies

The success of a BPR project is very much pegged on selection of the right methodology that meets the needs of the project and is well understood and supported by the project team. Hammer and Champy (1993) indicated that a BPR methodology is vital in setting the framework for undertaking a BPR project. A number of methodologies have been fronted by many researchers and the challenges to an organization is selecting the right approach that is best suited to their particular project taking into account their objectives, capabilities and economic or competitive requirements. There is no standard integrated methodology for BPR that exists and many BPR methodologies share common features.

The methodology by Hammer and Champy (1993) comprises of six phases. These include introduction to business reengineering, identification of business processes, selection of business process, and understanding of the selected business process, redesign of the selected business process and finally, the implementation of the redesigned business process. Davenport and Short's (1990) methodology recognize the

existence of a recursive relationship between IT capabilities and BPR, meaning that IT should be considered in terms of how it supports new or redesigned business processes, and recursively business processes and process improvement should be considered in terms of the capabilities IT can provide. The methodology is summarized in four steps namely, developing a business vision and process objective, identifying the process to be redesigned, understanding the measure of existing processes, identifying the IT levers, and designing a prototype of the process (Davenport & Short, 1990)

Kettinger et al. (1997) highlights another methodology referred to as process analysis and design methodology (PADM) which was introduced by the informatics process group (IPG) at Manchester University as a framework of tools and techniques, which can be used in a BPR effort according to particular circumstances. The PADM framework comprises the following steps, process definition, baseline process capture and representation, process evaluation, and target process design. The PADM framework is considered to operate in a strategic business context, meaning that it does not involve either a phase of creating a business vision or a phase of learning how other organizations' similar processes are performed. Talwar (1993) gave a detailed overview of the Talwar methodology which sought to strike a balance between strategy formulation, process, redesign, exploitation and management of the reengineered business. It entails initiation step, which defines strategic scope, scale and planning the change, the implementation step, which involves business redesign, and finally the integration and testing.

Coulson-Thomas (1994) explains the COBRA methodology which is a six stage BPR methodology designed to be implemented by a technocratic approach with due regard to people issues. The approach was adopted by the commission of the European communities in 1994. Coulson outlined the steps as; establishing an organization's approach to BPR, identifying the opportunity, analysis of an existing process, process re-design, implementation of the change, and finally performance monitoring. COBRA stands for constraints, opportunities, business, restructuring, and analysis. A number of other methodologies are highlighted in literature. Lindsay et al. (2003) gives details of Object Oriented methodology BPR.

2.3. BPR and Performance

Stoner (2001) defined organizational performance as the measure of how efficient and effective an organization is. Debela (2010) notes that the concepts of efficiency and effectiveness are vital in business because they are the cornerstones for measuring the organizational performance. The primary goal of any BPR project is to realize performance improvements and ensure that an organization meets its objectives. Farmer (1993) summarized organizations' objectives as, customer satisfaction, increased productivity; higher flexibility, increased employees' coordination and, improved competitive advantage. Guimaraes and Bond (1996) carried out a study on the impact of BPR on performance using dimensions of sales growth rate, market share operating profits, rate of profits to sales, cash flow from operations, return on investment, new product development, new market development, research and development activities, cost reduction program, personnel development and political/public affairs and found out that BPR helped to a moderate extent the areas of personnel development, cost reduction, new

product development and company operating profits. However, they observed that the impact was different from company to company suggesting that BPR implementation can be quite risky depending on a company, the application and the project management circumstances.

Shin and Jemella (2002) investigated the BPR methods in financial institutions based on a case study conducted in Chase Manhattan Bank and found out that BPR resulted in new products and services in addition to producing dramatic increases in revenue and operating savings. Altinkemer et al. (1998) empirically investigated the impact of BPR on firm productivity and overall performance and based his data on large U.S. firms in the Fortune 500 list that covers the period between 1987 and 2008 and reported that the performance and productivity measures improved in a decreasing manner after project initiation. He could not establish a clear evidence of superiority of BPR projects in terms of performance improvements and gave the opinion that BPR projects may not necessarily results in grand improvements and sometimes result in grand failures.

Kaptoge (2008) carried out a study of BPR project at Wrigley Company East Africa and established that the Company gained competitive advantage by implementing BPR and by adopting BPR practices that are critical for successful implementation. Momanyi (2012) undertook a study seeking to establish whether KPRL met its performance improvement objective by implementing BPR in asset management system and the challenges it faced and found out that KPRL drastically improved its materials approval process time by achieving a ten times reduction resulting in an eleven times reduction in cost.

Despite the many success stories, BPR could also be a very is a risky operation. Al-Mashari and Zairi (1999); Hall et al. (1993); Dennis et al. (2003); Holland and Kumar (1995) and Chiplunkar et al. (2003) highlight that 50-70 percent of BPR efforts fail to achieve their anticipated results. Sarker and Lee (1999) undertook a study on a failed BPR project undertaken by TELECO, a US telecommunications company where they highlighted the problems faced during the redesigning of business and the critical problems faced in implementing the project. Disii (2011) carried out a research study on BPR implementation and benchmarking at KPA and found out that the full impact of BPR and benchmarking projects on port throughput was not realized due to a number of challenges including political interference, wrong attitude to change and frequent changes in top management. Owino (2009) found out that many BPR projects in Kenya do not succeed when an organization fails to emphasize on the success factors recommended in BPR literature.

2.4. Key Success Factors for BPR Projects

The success of any BPR projects depends to a big extent on the degree to which the organization defines and deploys the well-researched critical success factors (CSF) in literature. Pinto and Slevin (1987) defines CSF approach as the determination of the set of factors that the manager considers critical for success. CSF can be characterized as internal (endogenous) or external (exogenous) to the organization. Flynn and Arce (1997) explains internal CSF as related to actions taken within the organization, which are issues or situations within manager's control, while an external CSF as related to actions performed outside the organization, which may not be under manager's control.

Al-Mashari et al. (2001) noted that many of the features that define success or failure of a BPR project are defined early in a BPR effort. They observed that the decisions made during the initial phase of the project, from commitment through actual justification and planning, usually determine 90% of these features and hence the likelihood of success or failure.

Jamali et al. (2011) identified seven critical success factors which he listed as collaborative working environment, top management support and commitment, IT infrastructure, training, less bureaucratic structure, culture, and adequate financial resources. BPR project involves all members of the organization and an enabling environment is created when all employees work together. Having friendly interactions reduces resistance to change and simplifies BPR implementation. Attaran (2000) highlighted that for a BPR project to be successful, the organization should focus on achieving the empowerment of people and the application of appropriate enabling technology.

Top management competence and support is a major success factor for any BPR project. Al-Mashari et al. (2001) observe that the top management plays a critical role in creating an environment conducive to implementation of the BPR project. In order to make sound decisions, they should have adequate knowledge about BPR implementation. Top management should exhibit transformational leadership and should possess a strong will to bring and manage change and they should possess risk management skills. Hammer and Stanton (1995) put leadership as the first key factor to the success of reengineering.

Top management should also take the role of enhancing communication and any change should be communicated throughout the organization in a motivating way, so that employees may welcome the change process (Davenport, 1993).

IT Infrastructure that supports the BPR systems is another very important key success factor. Salimifard et al. (2010) refer to IT as a natural partner of BPR and highlighted that it plays a critical and central role in BPR projects. The IT infrastructure should provide seamless interaction with BPR strategy. On the training factor, Al Mashari and Zairi. (1999) emphasizes on the need to have an exclusive training program to educating employees about the change taking place. He recommended that the training budget be increased by 30-35%. On Organization structure, McAdam (2003) explains that organizations should apply a more participative structure to avoid failure of BPR implementation.

Al Mashari and Zairi (1999) defined change management to include adjusted human and social related changes as well as adjustment to organizational culture. They incorporated adjustment of the reward system to bring motivation, review of the communication channels to ease the barriers to communication, empowerment of people by shifting of power and accountability to as lower level as possible. They emphasized the involvement of persons from every level and cross functional departments. Several authors have also recognized culture as a key success factor in BPR implementation (Abdolvand et al., 2008; Salimifard et al., 2010, Dennis et al., 2003; and Reijers & Liman, 2005). Organization culture is an important attribute in change management. It creates a sense of

togetherness and ownership of the project, openness to change and a positive perception to change which promotes the success of a project to a great extent. Al Mashari and Zairi (1999) associated a strong culture to positive changes, stress reduction and reduction in resistance to change.

Bashein et al. (1994) argue that an adequate financial resource is another very critical key success factor. Sufficient resources to meet the full cost of the project and any other cost due to unpredictable situation should be easily accessible. BPR is a costly process and proper budgeting needs to be done to ensure available finances that will support the project to its commissioning. Other authors have identified key critical success factors and Dubey and Bansal (2012) summarized these factors in details in Table 2.1.

Table 2.1 Classification of Key Success Factors - BPR

S. No.	Critical Success Factor
	Strategic Factors
1	Leadership
2	Work environment and culture
3	Top management support
4	Quality improvement systems
5	Technology transfer and absorption
6	Induction of IT tools and induction of ERP software
7	External interface management
	Radical Change Factors
8	Management vision
9	Acceptance and performance of Change management
10	Customers' involvement in viewing product quality and development and
11	Empowerment and collaborative workers
12	Response to changing volume and product mix
13	People skill interchangeably
14	Changing performance system from 'Man – hr' accounting to Budgeting system
15	Investment in R and D

16	Indigenization programme under Manufacturing Unit
17	Supplier partnership
18	Supplier relationship
19	Supplier quality and assessment of supplier performance
20	Resource value addition process
21	New process, product and service design development
	Operational factors
22	Implementation, Control, and monitoring of new process as per schedules
23	Customer management
24	Productivity improvement
25	Training
26	Quality policy to improve product quality
27	Communication - sharing information willingly
28	Team building
29	Resource preservation and utilization
30	Response to crisis
31	Reduce response time, cost by automation
32	Customer satisfaction
33	Managing resistance to change
34	Simplification of material flow, logistics, and other distinct operations
35	Desire for continuous performance improvement
36	Creating an enabling chart that describes BPR process
	Non – Financial performance Factors
37	Optimal utilization of man – hours
38	High technical reliability of products
39	Timely meeting customer's requirement
	Financial Performance Factors
40	Effective utilization of budgets at Cost centres
41	Optimum utilization of resources - within the overall budgets

Source: Dubey, S. K., and Bansal, S. (2012). Key Success Factors in Implementing BPR in a Government Manufacturing Unit–An Empirical Study. *International Journal of Business and Management*, 8(2), p107

2.5. Key Failure Factors of BPR Projects

An old adage states that failure to plan is planning to fail. Several researchers have given findings on the causes of high BPR failures. Al-Mashari and Zairi (1999) analyzed the literature and gave a summary of the soft and hard factors that cause failures in relation to

BPR. Cao et al. (2001) highlighted that the noted high rate of failure of BPR project may not be attributed to only one single reason but there may be several reasons that contribute to these failures. The following section analyses these factors and dimensions.

BPR is a big project requiring an organizational change in four dimensions namely, change in organizational process, change in organizational structure or design, change in organizational culture and change in organizational politics including power distribution. All these dimensions are interrelated and interdependent and a change in one will require a change in all other dimensions. Many organizations implement BPR to bring radical change in the process dimension and usually ignore the other three dimensions. Al-Mashari and Zairi (1999) notes that a negligence of any one dimension would result into a failure of BPR effort.

A key concern is problem in communication and organizational resistance. The management driving the BPR project need to communicate the ideas and vision of the organization and this should be done early enough before the commencement of the BPR project. Davenport (1993) argue that inadequate communication between BPR 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. Talwar (1993) argue that organizational resistance can result from inadequate communication between BPR teams and other personnel and that poor communication, worries about job loss and security combined with a sense of loss of control and position, particularly within middle management can result in resistance to change.

Focus on short term objectives rather than long term orientation has contributed to a great extent in failure of BPR projects. Belmiro et al., (2000) undertook a study of UK and Brazilian companies which adopted BPR. In their findings, many of these companies undertook BPR while lacking the basic concepts and this led to many unanticipated issues and problems and eventual failure of projects. Luo and Tung (1999) stated that the availability of complete information at the time of BPR planning and the selection of the right tools for the analysis of situation that best suits organizational requirements is vital for BPR success.

Creating a culture for change comes with enough problems and this has been cited by many authors as a key failure factor. Henderson and Venkatraman (1993) and Mumford and Hendricks (1996) all argue on the relationship between problems related to creating a culture of change and BPR failures. Other aspects considered here include, not considering existing management systems and organizational culture, a lack of trust between management and employees combined with an ignorance of others values, underestimating the role of politics in BPR, animosity toward BPR by IT and human resources specialists. Training is another critical factor. Without proper training and education, BPR efforts are bound to fail. Grover et al. (1995) makes the point that lack of appropriate training for the BPR team as well as a lack of understanding of BPR concepts and the absence of theory is a possible failure mechanism.

Management support is of paramount importance and any BPR endeavor that does not have the full support of senior management will struggle to attain its goals. Bashein et al (1994) makes the point that lack of top management attention and support, their sustained commitment and leadership and also lack of support from line managers contributes to failures. The BPR team needs to be effective. Inability to create cross-functional project teams and having difficulty in finding suitable team members can give rise to serious problems. The organization structure may be a cause of BPR failure. Davenport (1993) makes the point that the inability of an organization to create flexible hierarchical structures can also cause hurdles with people thinking only in terms of their own immediate working groups and that conflicts can also occur between and within BPR teams due to unclear definition of job roles.

Another factor is resources availability. BPR exercise has been noted as a very resource intensive undertaking and a failure would occur if all the necessary resources required are not available. Bashein et al. (1994) state that lack of required resources would cause a failure of a BPR effort. He advises that undertaking BPR without the provision of adequate or sound financial resources is a sure way of failing. They argue that it is important to understand the total financial impact of BPR, carry out a proper forecast of human, financial, and other resources otherwise lack of adequate resources would cause a failure of a BPR effort. The BPR project needs a proper process design and Hammer and Champy (1993) noted that issues could arise due to missing BPR process elements and due to lack of understanding and orientation of the exact project owners.

2.6. Empirical Literature Review

Patwardhan and Patwardhan (2008) carried out a study on whether BPR is a savior or just another fad in the UK healthcare and found out that applying business process re-engineering in the right circumstances and selected settings for quality improvement is critical for its success. Tarokh et al. (2008) surveyed BPR experiences in Iran to determine reasons for success and failures and concluded that BPR projects executed in Iran have failed to reach predefined acceptable success. They observed that lack of data from organizations is a big problem in BPR projects in Iran and recommended that every BPR project before execution needs deployment of success factors such as preparation for change, planning, recognition and design, evaluation, culture and change, and information technology.

Dubey and Bansal (2012) carried out an empirical study on the critical success factors in implementing BPR in a government manufacturing unit and found out that there is lack of coherence in implementing critical success factors in government units because of certain handicaps under which government agencies operate. They comment that government units can improve performance by adopting and adapting methodologies and some goals that have proven successful in private sector business. Sarker and Lee (1999) undertook a study on a failed BPR undertaken by TELECO, a US telecommunications company where he highlighted the problems faced during the redesigning of business and the critical problems faced in implementing the project.

Locally, several studies have been carried out showing the relationship between BPR and performance, highlighting key factors that contribute to success and challenges faced during BPR implementation Kaptoge (2008); Gitagama (2008); Owino (2009); Mireri (2010); Disii (2011) and Momanyi (2012). The general finding is that firms that are successful in implementation of BPR projects hugely apply the success factors and a number of other BPR projects have failed to realize their objectives due to lack of compliance with the success factors highlighted in literature by researchers.

2.7. Summary of Literature Review

This chapter has critically reviewed the literature on business process reengineering with a focus on the critical success and failure factors. It has looked at BPR methodologies where several methodologies have been discussed as fronted by different authors. The literature on BPR and performance has also been analyzed. The chapter also looked at work of other researchers on the key success and key failure factors of BPR projects and finally a review of empirical literature.

The current study on the failure factors of Merchant mode project at KPRL expounds the failure factors as fronted in literature with an aim of identifying the specific factors that contributed to the failure of merchant mode project. The study of literature has highlighted that many BPR projects fail to realize their goals due to various general factors this study aimed to expound on these general factors and identify specific factors that led to the failure of the merchant mode project at KPRL.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

This chapter discusses the research methods that guided the study. Firstly, it looks at the applicable research design, case selection, then the methods of data collection and finally, it explains how the collected data was analyzed.

3.2. Research Design

The design for this study is a case study. To meet the objectives of determining the factors that led to the failure of the Merchant Mode project, a thorough understanding of the project execution from initiation to commissioning is required. Soy (1997) explained the importance of case study research that it excels at bringing us to an understanding of a complex issue or object and can extend experience or add strength to what is already known through previous research.

3.3. Case Selection

Kenya petroleum Refineries was selected for the study. Champy (1995) gives BPR failure rate at 70% and KPRL's merchant mode project contributes to this statistics hence it was selected as a suitable case to determine the specific factors that caused the project to fail.

3.4. Data Collection

Primary data was collected using a questionnaire that was administered to informants at KPRL. Two members of top management, six members of middle management and four members at supervisory level participated in the study.

Meeting requests were sent to the informants and a discussion was held guided by the questionnaire which was divided into three parts. Part A of the questionnaire sought to give the general profile of the respondents. Part B of the sought to show the factors that contributed to the failure of the BPR project and Part C sought to establish the main challenges that were faced during the implementation of the project. The respondents were also requested to give their opinions on factors that may not have been in the questionnaire but may have contributed to the failure of the merchant mode BPR project.

3.5. Data Analysis

The data collected was checked for completeness, consistency and accuracy. It was compiled into an excel template and tabulated for ease of interpretation and analysis. The data was analyzed using descriptive statistics using the measures of mean and standard deviation.

CHAPTER FOUR: DATA ANALYSIS, RESULTS AND DISCUSSION

4.1 Introduction

This chapter covers the analysis, interpretation and discussion of collected data. First, a summary of the respondents is highlighted and then the chapter gives more details on the extent to which the discussed factors contributed to the failure of the merchant mode project and finally the analysis and discussion of the challenges that were faced by KPRL during the implementation of the project.

4.2. Profile of Respondents

This case study of BPR implementation at KPRL sought to find out the factors that contributed to the failure of the merchant mode project and the challenges faced during implementation. In order to construct the questionnaire which was appropriate to the research, extensive literature review was carried out and a discussion with the merchant mode project team members also enhanced the structure. The details of the respondents were captured in part A of the questionnaire while part B and part C had the factors categorized and measured on a five-point Likert scale ranging from one (1) denoting very low extent to five (5) denoting very high extent..

4.2.1. Level in Organization

BPR encompasses participation from all members of the organization and the success or failure depends on how all members contribute to the reengineering exercise. Table 4.1 gives the number of respondents and also shows that they were drawn from three levels of the organization, two from the top management, six from the middle management and

four members at supervisory level. The objective was to ensure that all levels of the organization were adequately represented so as to give a clear understanding of all factors that contributed to the failure of the Merchant mode project.

Table 4.1: Respondents Levels in Organization

Job Position	Frequency	Percentage
Top Mgt.	2	17%
Middle Mgt.	6	50%
Supervisors	4	33%
Total	12	100%

Source: Research data

4.2.2. Functional Representation

The respondents were picked from all the functions at KPRL as shown in table 4.2. This ensured that opinions across all functions were considered in determining the findings of the study.

Table 4.2: Functional Representation

Function	Frequency	Percentage
Human Resource	1	8%
Manufacturing	2	17%
Finance	1	8%
Engineering	4	33%
Commercial (Sales & Marketing)	2	17%
Health, Safety & Environment/Risk	2	17%
Total	12	100%

Source: Research data

4.2.3. Respondents involvements in BPR Project

Most of the respondents interviewed were part of the project team or were involved in the reengineering exercise directly. A few responds that were not directly involved but are part of the KPRL were also interviewed.

Table 4.3: Respondents Involvement in BPR

Direct involved	Frequency	Percentage
Yes	10	83%
No	2	17%
Total	12	100%

Source: Research data

4.3. Failure Factors of Merchant Mode BPR Project

Part B of the questionnaire consisted of questions aimed at establishing the factors that led to the failure of the merchant mode reengineering exercise. The respondents were required to give their opinion on the extent to which the listed factors were considered in the implementation of the Merchant mode Project by ticking in appropriate box where 1 referred to very low extent and 5 referred to the highest extent and table 4.4 shows a listing of all the factors and the scores.

Table 4.4: BPR Failure Factors

Factors	Mean	Standard Deviation	Rank
Merchant Project was motivated by need for better performance and competitive pressures	4.2	0.79	1
The project team had representatives from all important departments	3.7	1.34	2
IT personnel had a positive attitude	3.7	0.82	2
Clear definition of roles/tasks/expectations for the project team members	3.5	1.08	4
IT people were very competent	3.5	0.85	4
Everybody was accountable for accomplishing their tasks and goals	3.4	1.07	6
Employees Readily accepted the change and change management conducted well	3.2	1.23	7

There were regularly scheduled meetings between project managers and each level of project structure	3.2	0.79	7
Organization's commitment to continuous improvement	3.2	0.79	7
There was good communication among the project's team members	3.1	1.29	10
Project leader has a politically powerful position in the organization hierarchy	3.1	1.37	10
Top Management provided clear Vision and objectives of the project	3.0	0.67	12
Top management provided clear guidance, leadership and support in the implementation	3.0	0.94	12
There was good feedback about what was working or not according to project plans	2.8	1.14	14
There was careful planning for project details such as tooling, scheduling, maintenance, system user interfaces, quality, etc. before new process implementation	2.8	1.23	14
Targeted only a few critical (though cross-functional) business processes	2.8	1.03	14
Some process re-designers (Project Team) had best-in-kind process knowledge	2.7	1.16	17
Top management Understood the Project very well	2.6	1.43	18
Suitable IT tools were provided and performed well	2.5	0.97	19
Process re-designers (Project Team) knew the processes well from experience	2.4	1.17	20
Planning for IT support was highly integrated with planning for the reengineering processes (Merchant Project)	2.4	0.84	20
There was a thorough process analysis to identify and eliminate non-value added activities	2.1	0.99	22
Proper induction of IT tools and induction of ERP software	2.1	0.57	22
Customers' were fully involved and their views considered in the implementation	2.0	0.67	24

Source: Research data

The ranking in table 4.4 above indicate the extent to which the factors were considered during the implementation of the merchant mode project with the ranking of (1) indicating a high level of consideration and the lowest ranking (24) indicating a low level of consideration of the factor.

Results from the table indicate that the key drive towards implementation of the merchant mode project was the need for better performance and to address the competitive pressures. This factor was ranked as the highest with a mean score of 4.2 showing that KPRL team desired to change and improve its performance hence the merchant mode idea had support of the KPRL fraternity. This provided a focus towards which the goal of the project would be directed. Other factors top in the ranking revolve around people, their representation in the project team, the attitude of the IT team, role definition and accountability, employees' acceptance of the change, progress review through regular meetings, commitment to continuous improvement and communication among the project team members.

The factors with low mean and being ranked low in the list indicate that these were the factors that were least considered during the implementation of the merchant mode project. These factors with a mean of 2.5 and below included provision and performance of the right IT infrastructure, project team knowing the project from experience, the planning of the IT tool and its linkage to the planning for the BPR exercise, process analysis for elimination of non-value adding activities, proper induction of the IT tools, and lastly Customers' being fully involved and their views considered in the implementation being ranked at the lowest. The success of a BPR project depends so much to the extent at which the success factors widely discussed in literature are considered and implemented during the reengineering exercise and overlooking of some factors could be the reason for a failure of the reengineering exercise.

Two factors come out clearly as having been least considered in the implementation of merchant mode project. Customers' participation and involvement in the exercise, the application of technology by employing right IT tools and proper induction of the IT system. One of the major objectives of implementing a BPR exercise by organizations is to meet customers' expectations. Understanding customers' needs gives the much needed direction on how to address them. Hammer and Champy (1993) noted that issues could arise due to missing BPR process elements and due to lack of understanding and proper orientation of the project and hence a successful BPR should address the customer needs from the onset of the project so as to align the project to meet these needs. The right and adequate IT infrastructure has been noted as synonymous with successful BPR endeavors and Salimifard et al. (2010) refer to IT as a natural partner of BPR. Lack of adequate incorporation of IT resources including its proper induction is a key factor that has contributed to failure of BPR endeavors and this was a main factor that was not sufficiently considered by the merchant mode project.

Dubey and Bansal (2012) has further categorized the factors in table 4.4 into strategic, radical change and operational factors and table 4.5 gives the major groupings of these factors.

Table 4.5: Factors Categorization

Strategic Factors	Mean
Top Management provided clear Vision and objectives of the project	3.0
Top management Understood the Project very well	2.6
Top management provided clear guidance, leadership and support in the implementation	3.0

Suitable IT tools were provided and performed well	2.5
Proper induction of IT tools and induction of ERP software	2.1
Planning for IT support was highly integrated with planning for the reengineering processes (Merchant Project)	2.4
Project leader has a politically powerful position in the organization hierarchy	3.1
Radical Change Factors	
Employees Readily accepted the change and change management conducted well	3.2
The project team had representatives from all important departments	3.7
Process re-designers (Project Team) knew the processes well from experience	2.4
Some process re-designers (Project Team) had best-in-kind process knowledge	2.7
Targeted only a few critical (though cross-functional) business processes	2.8
Operational Factors	
Customers' were fully involved and their views considered in the implementation	2.0
Everybody was accountable for accomplishing their tasks and goals	3.4
There was good communication among the project's team members	3.1
There was good feedback about what was working or not according to project plans	2.8
Clear definition of roles/tasks/expectations for the project team members	3.5
There was a thorough process analysis to identify and eliminate non-value added activities	2.1
There were regularly scheduled meetings between project managers and each level of project structure	3.2
There was careful planning for project details such as tooling, scheduling, maintenance, system user interfaces, quality, etc. before new process implementation	2.8
IT people were very competent	3.5
IT personnel had a positive attitude	3.7
Organization's commitment to continuous improvement	3.2
Merchant Project was motivated by need for better performance and competitive pressures	4.2

Source: Research data

Table 4.6 shows the mean for the three major group of factors and a ranking in order of how they were considered during the implementation of merchant mode project.

Table 4.6: Summary of Factor Grouping

	Mean	Rank
Strategic factors	2.6	3
Radical Change factors	2.9	2
Operational Factors	3.1	1

Source: Research data

Table 4.6 indicates that KPRL paid a lot of attention on operational factors then radical change factors and lowest consideration was given to the strategic factors. The strategic factors encompass top management input into the BPR project, through provision of clear vision, objectives, leadership and support, and the contribution of the IT system to the overall performance of the project. Management input was rated high hence the low rating of the strategic factors was due to the poor rating of the IT system. In developing the strategy for the merchant mode project, right IT tools were paramount to the success of the exercise. Davenport and Short (1993) highlighted the recursive relationship between IT capabilities and BPR. The results indicate that the merchant mode project at KPRL gave least consideration to IT tools and systems and this was so as KPRL did not invest in a new and robust IT system but customized the existing system to be applied for BPR exercise. KPRL upgraded its IT system though some modifications and the modified system did not meet the demands of the project adequately.

The findings indicated that the components of the radical change factors were also not very well considered and there is scope for improvement. The elements of operational

factors varied in their contribution some being ranked highly including the drive or motivation for the merchant mode project, the attitude and competence of IT personnel and the participation and accountability of the project team. Other factors had a low mean score including the review of the process in order to eliminate those activities not adding value to the process and the involvement of the customers and consideration of their views during the implementation.

4.4. Challenges KPRL Faced in implementing the Merchant Mode Project

Part C of the questionnaire consisted of questions aimed at establishing the challenges KPRL faced during the implementation of the merchant mode project. The respondents were required to give their opinion by indicating on a scale of 1 to 5 where 1 referred to a low extent meaning KPRL did not face that challenge and 5 referred to the greatest extent to which KPRL faced the challenge. Table 4.7 gives the summary of the findings.

Table 4.7: Challenges KPRL Faced in Implementing the Merchant Mode Project

Challenge	Mean	Standard deviation	Rank
Lack of proper IT tools and systems	4.3	0.78	1
Poor communication	4.2	0.94	2
Commitment to Existing Processes Too Strong	4.1	0.67	3
Project not customer-centric	4.0	1.04	4
Desire to Change Not Strong Enough	3.9	0.67	5
Insufficient training	3.9	1.24	5
External Interference-Political, Sabotage,	3.9	1.51	5
Performing BPR (the Project) as a one-off project with limited strategy alignment and long-term perspective.	3.8	0.83	8

Implementation of generic best-practice processes that do not fit specific company needs	3.7	0.89	9
Inadequate Preparation (Vision, Policies, and Capacity)	3.6	1.16	10
Resistance to change within the organization	3.6	1.16	10
Quick Fix Approach	3.4	1.00	12
The costs of the change seemed too large	3.3	1.15	13
Cross-functional barriers	3.3	1.37	13
Poor project management	3.2	1.19	15
Ineffective project work-groups / lack of dedicated	3.2	1.27	15
Project goals were not clear	3.1	1.00	17
Over trust in technology solutions	3.0	1.28	18
Consultants led/ dominated process	2.8	1.11	19
Management interference	2.7	1.15	20
Lack of top management support/ leadership	2.6	1.16	21
The Project was an isolated activity not aligned to the Business Objectives	2.4	1.24	22

Source: Research data

The findings point to IT tools and systems as the major challenge KPRL experienced in implementing its merchant mode project. From the discussion with respondents, a system configured to address issues of the merchant project was required. In its place, the old system was used and reconfigured to tackle the merchant mode and this was incompatible with the requirements of the project. Communication was also highlighted as a challenge with some respondents indicating that regular feedback as to the progress of the project was lacking. The communication among project team members may have been good but feedback and communication to wider KPRL community was noted to be very low. Davenport (1993) argue that inadequate communication between BPR 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. This lack of

communication also contributed to the third challenge where commitment to the existing process continued to remain strong.

The planning of the project did not adequately involve the opinion of the customers and hence the reengineered process did not address the concerns of the customers adequately and this was a major challenge to its success. Many persons were not adequately trained on the needs and expectations of a successful reengineering exercise as supported by the findings that training was a challenge. Grover et al. (1995) makes the point that lack of appropriate training for the BPR team as well as a lack of understanding of BPR concepts and the absence of theory is a possible failure mechanism and a challenge to successful implementation of a BPR project.

Top on the list of the challenges to success was external interference mostly political. KPRL needed backing and support from external stakeholder for the new merchant mode project to succeed but respondents indicated that despite the internal inefficiencies and challenges, the political influence contributed to the failure, particularly as the concerns of the OMCs prior to the merchant mode had not been addressed. These were factors that the merchant project team had not anticipated. The factors that ranked low meaning they were not major challenges included; over trust in technology solutions at a mean of 3.0, Consultants leading or dominating the process at a mean of 2.8, management interference at mean of 2.7, lack of top management support and leadership at a mean of 2.6, project being an isolated activity and not aligned to business ranking lowest at a mean of 2.4

CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter gives the summary of the study, the conclusions drawn and the recommendations offered. The chapter further highlights the limitations of the study and also gives suggestions for future research.

5.2. Summary

This study sought to establish the key factors that led to the failure of the merchant mode project at KPRL and to determine the challenges that were faced during the implementation of the project. An extensive review of literature on BPR was carried out which gave the basis and the guideline to the factors that were considered in this study. The findings were based on data collected by means of questionnaires administered to employees across all functions of KPRL and twelve respondents were targeted in three levels which included two top management members, six middle management members and four supervisors.

The high rate of failure of BPR project may not be attributed to only one single reason but to a combination of factors and this study confirmed this and found out that a number of factors contributed to the failure of the merchant mode project. Literature has emphasized the importance of the linkage between IT tools and system with BPR and KPRL did not adequately invest in a proper system to manage the change. IT has been

referred to as a natural partner of BPR and highlighted that it plays a critical and central role in BPR projects and that the IT infrastructure should provide seamless interaction with BPR strategy. The IT system was required right from the early stages of BPR implementation and the project team needed to be properly and adequately inducted into the application of the IT tool for effective implementation. The emphasis is on the right IT tool which is robust enough to address the needs of the project.

In addition, the study found out that though the employees had the determination to see the project succeed, they lacked crucial skills and knowledge of embracing the new process. This was caused by lack of adequate training, poor communication between the project team and the wider employees' community. The change management process did not effectively change the organization culture and this was manifest in the finding that the employees still clinged to old systems and still had a strong commitment to existing processes.

The study also determined that the implementation of the project was faced by a number of challenges. Lack of proper information technology tools and system was ranked highest followed by poor communication and strong employees commitment to existing processes. Other challenges included the project not being customer centric, desire to change being not strong enough, insufficient training and political interference, all of which had a mean score above 4.0.

5.3. Conclusion

KPRL implemented the merchant mode BPR project with an aim of realizing benefits through measures of performance including reduction in cost, improvement in quality of service, improved speed of service delivery and eventually meeting its customers' expectations. The project was not successful based on these measures of performance. This study established that the main factors which contributed to its failure included lack of proper IT system and tools, lack of proper and adequate training on the new process, poor communication and lack of adequate preparation for change management. Cao et al. (2001) note that the high rate of failure of BPR project may not be attributed to only one single reason but there may be several reasons that contribute to these failures and this has been manifest in the case of KPRL's merchant mode project.

The implementation of the merchant mode project was also faced by a number of challenges which included inefficient information technology tools and system, inadequate sensitization and preparation of employees for the new process through adequate training and regular feedbacks to enhance communication, and proper change management with emphasis to organization culture change. Nonetheless, success of the merchant mode project could have been realized by adequate preparation in terms of vision, policy and capacity, adequate investment in the right tools of trade and provision of adequate resources to the human capital. Studies have shown that BPR project need deployment of success factors such as preparation for change, planning, recognition and design, evaluation, culture and change, and information technology from early stages before its execution (Al-Mashari et al., 2001; Belmiro at al., 2000; Luo & Tung, 1999)

5.4. Recommendations

The success of any BPR effort requires concerted effort by all people in the organization, right from top management, who need to provide the vision and clear objectives together with the resources necessary, down to other employees who need to support the change in deeds and thoughts. The literature is laden with cases of BPR efforts that have succeeded and others that have failed and this study has also confirmed that a combination of factors contributes to the success or failure of a BPR endeavor. It is therefore a recommendation to KPRL and other organizations wishing to undertake a BPR project to make adequate preparation by first studying all the factors that would be key to making the project a success. The organization need also to be fully prepared financially to procure relevant IT tools and systems as BPR and IT have been noted to have a recursive relationship. Seeking guidance from professionals who have undertaken similar projects is important for a successful BPR project.

5.5. Limitations of the Study

This study has in no doubt brought out the factors that contributed to the failure of the merchant mode project and challenges faced during its implementation. However, the study was not without limitations. The findings were based on opinions of employees of KPRL majority of whom were involved directly in the BPR and they could be subject to sources of bias either emanating from own conviction that they did the best, or from bias in their opinion of performance of top management and other functions in their role and this could result in biased feedback.

Implementation of BPR requires the organization to be customer centric in order to address the issues of key concern to the customer. This study did not seek the opinions of the customer but assumed that the secondary data available in KPR's records was representative enough to give an indication of response to customers' needs. The comparison of performance pre and post implementation of the merchant mode project was analyzed instead. Despite all these, the researcher took every precaution to give very objective findings of the study.

5.6. Suggestions for Future Research

Many BPR projects fail to realize their goals and studies outline common factors that contribute to these failures. Though these factors do not apply equally to all BPR exercises, and though some organizations have intrinsic factors that affect them, what is common is the fact that some of these factors are not identified during the planning and initial phases of the BPR. A focus on factors that organizations consider during the planning of BPR exercise and their effect to the success or failure of BPR is a possible area of focus. Another potential area for research is on the role of IT in BPR projects and its contribution to success or failure of a BPR project. Future studies could also expand the scope and target more organizations. This study was limited to one firm and one project and a study could be carried out to determine whether the failure factors or success factors have a common relationship within a region by considering several projects in different organizations of that region.

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APPENDICES

Appendix 1: Introduction Letter



UNIVERSITY OF NAIROBI
COLLEGE OF HUMANITIES AND SOCIAL SCIENCES
SCHOOL OF BUSINESS
DEPARTMENT OF MANAGEMENT SCIENCE

Telephone: 4184160/1-5 Ext. 220
Email: commerce@uonbi.ca.ke

P.O. Box 30197
Nairobi, Kenya

INTRODUCTION LETTER

14th August 2013

Human Resource Manager,
Kenya Petroleum Refineries Limited,
P.O. Box 90401 -80100,
Mombasa, Kenya

RE: REQUEST FOR DATA ACCESS

The bearer of this letter, GACHAU MICHAEL KARIUKI of Registration Number D61/61072/2011 is a Master of Business Administration (MBA) student of the University of Nairobi, Mombasa Campus.

He is required to submit as part of his coursework assessment a research project report. His project is titled: *FAILURE FACTORS FOR BUSINESS PROCESS REENGINEERING: A CASE OF KENYA PETROLUUM REFINERIES LIMITED*. We would, therefore, appreciate if you assist him by allowing him to collect data in your organization for the research.

The data will be used solely for academic purposes and a copy of the final report will be availed to you on request. Thank you.

Yours Sincerely,

Odock Stephen Ochieng,
Lecturer, Department of Management Science



Appendix 2: Questionnaire

This research aims at establishing factual views on the factors that contributed to the failure of Merchant Mode Project.

PART A- General Details

Part A; consists of questions aimed at capturing the general information about the Employee

- 1) Job position.....
- 2) Directly involved in implementation of the Merchant Mode project (Y/N)

PART B- Implementation Factors Considered.

Part B; consists of question areas aimed at establishing the factors that contribute either to success or failure of the project and the challenges experienced by KPRL in implementing the Merchant Mode Project.

Please give your opinion the extent to which you consider the following factors were considered in the implementation of the project where 1-refers to very low extent and 5 refers to the highest extent.

SN	DIMENSION/FACTORS	1	2	3	4	5
1	Top Management provided clear Vision and objectives of the project					
2	Top management Understood the Project very well					
3	Top management provided clear guidance, leadership and support in the implementation					
4	Employees Readily accepted the change and change management conducted well					

5	Customers' were fully involved and their views considered in the implementation					
6	BPR project team had representatives from all important departments					
7	Everybody was accountable for accomplishing their tasks and goals					
8	There was good communication among BPR team members					
9	There was good feedback about what was working or not according to project plans					
10	Clear definition of roles/tasks/expectations for the project team members					
11	Suitable IT tools were provided and performed well					
12	There was a thorough process analysis to identify and eliminate non-value added activities					
13	There were regularly scheduled meetings between project managers and each level of project structure					
14	There was careful planning for project details such as tooling, scheduling, maintenance, system user interfaces, quality, etc.					
15	Process re-designers knew the processes well from experience					
16	Some process re-designers have best-in-kind process knowledge					
17	Target only a few critical (though cross-functional) business processes					
18	Proper induction of IT tools and induction of ERP software					
19	IT people were very competent					
20	IT personnel had a positive attitude					
21	Planning for IT support was highly integrated with planning for reengineering processes					
22	Project leader has a politically powerful position in the organization hierarchy					
23	Organization's commitment to continuous improvement					
24	BPR project motivated by need for better performance and competitive pressures					
25	Others (Please Specify)					

PART C- Challenges Experienced in Project Implementation

This Part consists of question aimed at establishing the challenges that KPRL experienced during the implementation of the project. Please give your opinion on what you think about these factors where 1 indicates you don't agree with the challenge and 5 indicates you strongly agree that the challenge faced KPRL

	CHALLENGE	1	2	3	4	5
1	Desire to Change Not Strong Enough					
2	Commitment to Existing Processes Too Strong					
3	Quick Fix Approach					
4	Inadequate Preparation (Vision, Policies, and Capacity)					
5	The Costs of the Change Seem Too Large					
6	BPR Isolated Activity not aligned to the Business Objectives					
7	Lack of top management support/ leadership					
8	Consultants led/ dominated process					
9	Poor project management					
10	Lack of Proper IT tools and Systems					
11	Resistance to change within the organization					
12	Implementation of generic best-practice processes that do not fit					
13	Over trust in technology solutions					
14	Performing BPR as a one-off project with limited strategy					
15	BPR Goals were not clear					
16	BPR not customer-centric					
17	Poor communication					
18	Insufficient training					
19	Ineffective project work-groups / lack of dedicated teams					
20	Cross-functional barriers					
21	Management interference					
22	External Interference-Political, Sabotage,					
23	others (please specify)					