A SURVEY OF THE USE OF BUSINESS PROCESS REENGINEERING APPROACH IN THE KENYAN PHARMACEUTICAL MANUFACTURING INDUSTRY

BY
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A research project submitted in partial fulfillment of the requirements for the award of Master of Business Administration, Faculty of Commerce, University of Nairobi

November 2000

THIS IS MY WORK AND HAS NOT BEEN PRESENTED FOR A DEGREE IN ANY OTHER UNIVERSITY

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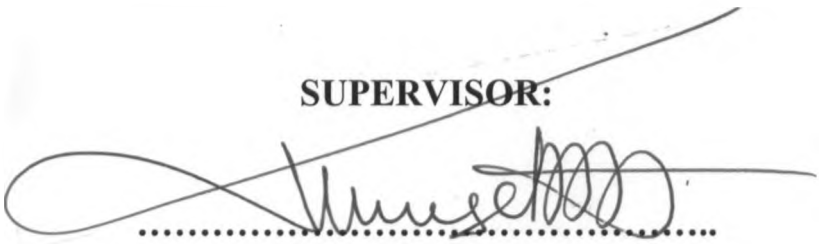

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This project is dedicated to my dear husband Austin Ochieng', my mother Tabitha Omolo Wanekaya of whom without their valuable support this would not have been

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ACKNOWLEDGEMENT

I would like to extend my sincere gratitude to my supervisor J.K. Kipng'etich for his guidance and support accorded to me throughout the research.

I would like to thank my bosses at SmithKline Beecham, Jane Tsalwa and Gerald Githinji who gave me time off work whenever required.

I would like to appreciate the support of my colleagues, teaching and technical staff of the department of Business Administration, University of Nairobi for creating an enabling environment conducive for work. I would also want to thank my colleagues at work to whom I delegated my duties to while away.

My mother is highly appreciated for her drive and provision of my first semester college fee and her encouragement through out, not forgetting my husband for his invaluable support. Finally I extend my deepest gratitude to the Almighty God for sustaining me through out my study.

ABSTRACT

The primary objective of this study was to establish the state of Business process reengineering (BPR) in the Pharmaceutical Manufacturing firms in Kenya. The rationale of the study arose from the fact that little is known about the state of BPR in the Pharmaceutical industry in Kenya. We are having cost of essential drugs being exorbitantly high unlike in the develop world and hence being unaffordable to consumers, hence the interest in BPR.

To facilitate this study a survey was carried out across the current 20 Pharmaceutical manufacturing firms in Kenya. The respondents gave information aimed at evaluating the reasons why companies implement BPR, type of processes companies had identified or reengineered and implementational issues behind the BPR concept. The results show that

1. The main drivers of BPR are competitive advantage and decrease in operating costs.

2. Insufficient knowledge and lack of management support are the main reasons behind the Pharmaceutical fir ms in Kenya not implementing BPR

3. Company culture is the main reason for failure of BPR.

These results should however be interpreted in consideration of the limitations of the study, specifically with regard to the number of firms surveyed being small the researcher managed 90% response rate as opposed to the 100% expectation

CHAPTER 1

INTRODUCTION

1.1 BACKGROUND

The idea of designing businesses has been around for a long time and structured methods for doing this emerged in the 1980's. With the relentless pressure on performance, which prevails, there is a growing interest in business process redesign or re-engineering.

For many years organizations have not fundamentally changed the way things are done. In some cases changes predated the introduction of computers and in others old processes were simply automated. This has changed as organizations have realized that to maintain their market share and have an edge over their competitors, they have to change and improve their processes. The competitive climate and the pace of change within and without the firm has encouraged a more coordinated and fundamental approach to planning and design of business activities hence a change in the process.

As organizations seek to obtain strategic advantages by redesigning the way they do business, they are finding the process fraught with uncertainty. Put simply, change is difficult. In some instances, the prospect of change is so onerous that the only way to effect change is to liquidate the existing enterprise and start again. A consensus is emerging that successful organizations of the next millennium will be those that embrace *continuous change* as a business paradigm. Such organizations will be able both to adapt to changes in the marketplace and to lead the market in directions optimal to the organization's goals by continually adapting their products, processes, and internal structures to changes in the business environment. Hence the development process has been from improvement to radical changes in the process.

There has been an exponential increase in the number of publications dealing with organizational change and its impact on productivity and quality improvement in the last decade. The most successful examples seem to be related with process-focused change,

particularly found in the total quality management and re-engineering movements. Examples of successful application of total quality management to improve organizations have been commonplace in the literature [Venkatraman, (1994)]. This is not the case of re-engineering, which still seems to be seen with reserve especially in the Kenyan situation

A survey in (Champy, 1995) shows that re-engineering has had widespread adoption in the private sector. Approximately 70 per cent of all private businesses in US and Europe have run, or are running, some form of re-engineering project. The same survey suggests that the failure rate of re-engineering attempts has been equally high - over 70 per cent. A discussion, following that survey, suggests that much of that failure has resulted from a lack of change in management paradigms, which should accompany the radical changes in the business processes. Edward and Peppard (1995) survey with consulting companies specializing in re-engineering indicates that some other factors are likely to be lack of communication of a clear vision of the project, lack of staff participation and ownership, lack of involvement from staff at different levels, failure to instill a re-engineering culture, and lack of project organization and planning.

The technique Business Process Re-engineering (BPR) has evolved as a powerful and practical tool enabling rapid enterprise restructuring and change management. The deluge of published literature on BPR and related techniques, such as Continuous Process Improvement (CPI), evidence the popularity of the re-engineering paradigm in the industry and research community [Hammer and Champy (1993)] and [Brandon and Morris (1993)].

Organizations are recognizing the potential of re-engineering to deliver quantum leaps in performance. Two main approaches to reengineering have emerged. The first known as *Process Reengineering* offers the opportunity to rethink and streamline individual processes. The second known as *Business Reengineering* provides an approach to rethink and redesign the entire business behind a more focussed, competence based competitive strategy. The driving forces behind re-engineering can be well summarized as 3C's being: Customer, Competition and Change.

1.2 STATEMENT OF THE PROBLEM

The local Pharmaceutical industry before independence was small and largely confined to traders of imported products. With independence and government focus on healthcare, the industry had a booming period in the 60's and 70's such that in the early 80's there were about 30 Pharmaceutical manufacturing companies in Kenya. However in the mid 80's when the Kenyan government followed the policy of liberalization as a measure of economic reform, the industry started undergoing transformation. This saw a growth in the trading sector, leading to intense competition. Our economy at the moment is not conducive for survival of manufacturing firms as we are still talking of tax on raw and packaging materials whereas regional blocks e.g. Comesa are advocating for zero tariffs on member states. The country's economic growth has been declining since the late 70's in spite of huge inflows of foreign aid commonly known as official development assistance (Business week, Daily Nation 26th September, 2000)

According to the recently published Interim Poverty Reduction Strategy paper, Kenya's rate of economic growth has been declining steadily since the 70's and shows no signs of improving. Based on this kind of environment, it is deemed necessary to constantly reengineer operations within the organization for survival.

Many successful business process-reengineering cases have been presented both in management and Scientific journals. It has been repeatedly claimed that BPR has on one hand resulted to dramatic improvements in performance while on the other there have been many complete failures. However, systematical studies on the drivers of BPR initiatives and reasons for success and failure have been scarce. I therefore decided to conduct a survey of BPR experiences in the Pharmaceutical Manufacturing Industry in Kenya. There are many opportunities making BPR of great importance to the Pharmaceutical Manufacturing Industry, just to name a few…

Due to liberalization of the economy, local firms, which used to operate in a controlled environment, are now facing competition from foreign products. Therefore these firms have had to adapt to change to survive. The Pharmaceutical industry is not spared from this.

It is wise to note that the cost of essential drugs is exorbitantly high in the developing countries as compared to the cost of the same in developed countries. I've had about process improvements and quality through standards in our industry, however little has been said about reengineering. It is therefore crucial that patients get affordable essential drugs in the country. With the deteriorating healthcare provisions this is mandatory as more and more people are moving towards self-medication, hence product has to be efficacious, affordable and easily available.

The drug and chemists guide 2000 focus is on government intervention to ensure that the essential drugs are affordable and accessible to all. It states that the government should invoke the law of parallel importation, such that an importer can purchase any drug from the cheapest country. What does this therefore do to the Pharmaceutical Manufacturers in Kenya; it implies that those who have not looked at their processes are thus forced to relook into them with a view of enhancing efficiency and improve productivity. This implies that processes that are not value adding will have to be done away with or changed completely hence reengineered.

In order to systematically study BPR as a management tool, the researcher carried out a survey in the Pharmaceutical Manufacturing industry in Kenya. Since the frequency of the reengineering initiatives in the Pharmaceutical industry in Kenya was unknown, the researcher approached the companies by sending a seven-paged questionnaire (Appendix 1) to the operations managers. The questionnaire covered frequency of BPR, type of processes companies had identified or reengineered.

1.3 OBJECTIVES OF THE STUDY

The objectives of the study were to:-

1 Establish the state of Business Process Reengineering in the Pharmaceutical Manufacturing Firms in Kenya.

2 Establish experiences from the BPR projects

1.4 IMPORTANCE OF THE STUDY

Every country requires a vibrant, functioning and efficient Pharmaceutical industry. This is because the lives of people are dependent on the products produced from this industry. The environment in which the Pharmaceutical manufacturing industry in Kenya is operating under is putting challenges to the industry. This implies that the Pharmaceutical Manufacturing firms in Kenya have no choice but to look at their systems and processes if they have to compete in the global village. It is in the light of the above that this study is of importance. Secondly, studies on BPR have been carried out in the developed world an it would be interesting to see if the drivers, scope, implementation and success or failures of the changes hold in our environment as in the developed world. The results of this research will benefit…

1. Scholars who wish to do further research into the Pharmaceutical industry

2. The public since accessibility to good quality Pharmaceutical products that are cheap is a matter of great public interest.

3. Assist business managers know the trends of change in the industry

4. Investors as it will provide them with an overview of the changes in the Industry and hence facilitate well-informed decisions.

5. The industry as it will help them know the trends of change in relation to Reengineering.

CHAPTER 2

LITERATURE REVIEW

2.1 BUSINESS PROCESS REENGINEERING

According to the CSC index more that 70% of American and European large companies have adopted BPR as a means to improve their operations. The frequent use of BPR is partly due to several success stories that have shown 70% savings in time and cost [Belmonte (1993), Hammer, (1990)]. High potential benefits have tempted companies to adopt reengineering, despite the likelihood to fail in undertaking. Some researchers have estimated the failure rate to be even as high as 70%[Bradley, (1994)]. In the face of increasing costs, competition, internal operational problems and declining profits even the risk has seemed to be acceptable [CSC Index, (1994)]. I'll look at key frameworks for describing and understanding BPR and its different forms as well as facets important for successful implementation of BPR projects.

Hammer and Champy (1993) define Business Process Reengineering 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." *Continuous Process Improvement* (CPI) is the collection of activities that are systematically and continuously performed to bring about enhancements in enterprise performance. The main difference between BPR and CPI is in the extent of improvements targeted by these two methodologies. BPR targets radical change while CPI is focused on incremental change. A related methodology, *Total Quality Management* (TQM) is "a means of operating a business that seeks to maximize a firm's value through maximizing customer satisfaction at the lowest possible cost" [Hall and Rosenthal, (1993)]. Therefore, TQM is the systematic application of methods and tools to accomplish CPI.

PROCESS IMPROVEMENT VERSUS PROCESS INNOVATION (Davenport 1993)

ACTIVITY	IMPROVEMENT (TQM)	INNOVATION (BPR)
Level of change	Incremental	Radical
Starting point	Existing process	Clean slate
Frequency of change	One-time / continuous	One-time
Time required	Short	Long
Participation	Bottom-up	Top-down
Typical scope	Narrow, within functions	Broad cross-functional
Risk	Moderate	High
Primary enablers	Statistical control	Information technology
Type of change	Cultural	Cultural / Structural

2.2 KEY ASPECTS OF BPR

BPR as defined by Hammer is 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. Despite there being many definitions there is a common understanding amongst Gurus in this field on the key elements of BPR. The following key characteristics are typical to BPR projects:

2.2.1 Radical change.

Reengineering literature advocates radical change as opposed to small incremental steps. BPR projects attempts to question and usually abandon old ways of operating and replace them with less hierarchical organizational structures and team-based work arrangements. This often leads to many simultaneous changes, not only in organizational structures, but also in individual tasks, required skills and responsibilities [Hall et.al, (1993)].

2.2.2 Dramatic performance improvements.

Organizations seeking to reengineer their operations should be bold enough not to be satisfied with modest improvement targets [Hammer, (1990)]. Instead of aiming at a

small improvement in one performance measure they should set their sights on dramatic improvements in cycle times, production costs, quality of products or services and operational efficiency simultaneously.

2.2.3 High potential business benefits.

In addition to quantitatively measurable and explicit performance improvements, BPR often leads to additional benefits creating opportunities for future success. These may include improved customer satisfaction, increased flexibility and better information and control of both internal work processes and customer behavior.

2.2.4 Process-based organizations.

Reengineering literature also argues that organizations employing functional specialization and structures have too narrow perspective and are not flexible enough to succeed in the current turbulent business environment. Solution to these problems is to arrange work cross-functionally along the natural flow of work resulting to organizations based on core business processes, shared information and objectives.

2.2.5 Customer orientation.

The objectives of reengineering should be based on the needs of the customer, which can be internal or external to the company. Every step of the business process should be designed to concretely add value to the customer [Hammer, (1990)].

2.2.6 Information technology as an enabler.

Information technology is considered be the most important enabler for reengineering. This role is based on its capability to make alternative operational solutions economically feasible [Davenport and Short, (1990)]. Even though recently also other enablers of change have surfaced, the role of IT has been essential in most reported BPR cases [Davenport, (1993)].

2.2.7 Rapid pace of change.

The radical and dramatic nature of reengineering has also called for rapid changes. For example, Hammer and Champy (1993) claim that the changes should be implemented within a year. Recently, Stoddard and Jarvenpaa (1995) have however, questioned whether this rapid pace of implementation can be achieved in practice.

2.2.8 High risks.

The high failure rate of reengineering projects indicates that considerable risks are also involved. For example, Grover et al. (1995) have identified several classes of reengineering related risks that need to be managed in order to succeed in BPR projects.

It is often difficult to separate BPR initiatives from other types of development projects. The use of the term BPR does not make a continuous improvement project reengineering. On the other hand, radical changes in firms can and are made without using any BPR concepts. The list above of typical characteristics of BPR projects can help to recognize the true nature of each development effort.

2.3 BPR AS A SOURCE OF SUSTAINABLE COMPETITIVE ADVANTAGE

A business process is a set of logically related tasks that use the resources of an organization to achieve a defined business outcome [Davenport and Short, (1990)]. BPR is the radical redesign of business processes to achieve dramatic improvements in critical measures of performance [Hammer and Champy, (1993)]. Thus BPR espouses radical changes in existing obsolete organizational tasks rather than using contemporary technology to speed up existing tasks to improve performance.

The common theme running through the BPR literature is the concept of radical change in processes by using contemporary technology and business practices. Thus BPR involves the use of state of art technology, documentable strategies, practices procedures, and training of personnel to handle change.

Competitive business environment leading to diminishing profits in the eighties forced companies to rethink their strategies for developing competitive advantage. With the emergence of BPR [Davenport and Short, (1990); Hammer, (1990)] it seemed that a solution for surviving and developing competitive advantage in these turbulent times had arrived. Early successful BPR applications opened the floodgates for an abundance of literature on concepts, methods, technology and strategies for BPR.

While BPR is essential to bring to date obsolete organizational procedures and practices, it may however be unable to generate sustainable competitive advantage. The support for the argument is drawn from the literature on the resource-based view of the firm [Sanders (1989)]. An alternate option of using information systems (IS) developed from a resource-based perspective for strategic management of information is presented for developing sustainable competitive advantage.

There has been much discussion as to whether BPR can be argued to have sprung from the loins of Michael Hammer and James Champy (1993) or whether BPR is not new at all but a creative melange of preexistent techniques and methods. There is much that has been around for sometime such as the extensive use of Information Technology and new perspectives on organizational structure and culture but there is also much that has been around for some time under the guise of Process Improvement, the Quality movement, and so on.
The extensive dispute about the origins of BPR has clouded some of the linkages between BPR and such concepts as innovation. To most of us it does not really matter exactly how BPR evolved. What does matter is the extent to which our understanding and successful implementation of BPR can be enhanced through reference to other literatures and experiences. It is interesting to speculate how BPR would have developed had Davenport's (1993) term "Process Innovation" been picked up by consultants and the business community rather than Business Process Reengineering. One effect would likely have been a greater emphasis on innovation in business processes.

One reason why BPR seems new is that process innovation has often been the poor relation of product innovation. Lorentz (1995) notes that product innovation often takes precedence over process innovation in many organizations. Indeed, many researchers have argued that this is appropriate. It has been argued that process innovation does not

become important until products reach the mature stage of their life cycle. This conventional wisdom is now being questioned. With reference to their study of the pharmaceutical industry Pisano and Wheelwright (1995) identify a number of characteristics that heighten the importance of process innovation:

1. Shorter product life cycles
2. Increasingly hard-to-manufacture products
3. Fragmented, demanding markets
4. Growing technological parity

Although Pisano and Wheelwright's arguments are developed with reference to a specific industry their observations would seem to be much more generally applicable. For example, many manufacturing companies are facing rapidly reducing product life cycles and markets that are becoming increasingly fragmented and demanding.

What can we learn by focusing on process innovation as a way of shedding light on BPR? First, it alerts us to the need both to investigate the ways in which we can become innovative in our development of business processes and also recognize how closely process innovation is linked to product innovation. Sometimes we seem to lose sight of the product or market dimension of BPR. We are not reengineering (or innovating) for innovations sake. We must focus our reengineering efforts on the characteristics of business processes that allow us to improve the customer value-add of the product or services they create. It is worth remembering that redesigning processes so that quality of the working life of employees may lead to increased value add directly through improved quality or indirectly by making employees happier and more responsive to customers and each other [Davenport, (1993)].

Second, it forces us to focus on organizational change and change management. Process innovation is both influenced by the organization and its members. There has been considerable research into the characteristics of innovation and approaches to stimulating and managing innovation in organizations. There is a need to recognize how important it is to create organizational conditions that stimulate innovation both with respect to process and product [Davenport, (1993)].

2.4 BPR AND THE STRATEGIC LINK

The strategic link lies on an earlier observation that in reengineering we must take customer value into account but it goes considerably further. We need to be able to identify the business processes that are most strategically relevant. Recent work by Hall et al (1993) has directed our attention to identifying the core competencies of an organization and being able to focus on the future potential for such competencies. Pisano and Wheelwright, among others, note that process competencies are often a lasting source of competitive advantage. The quantum leaps of performance change to nature of the competitive market place and can often arise as a result of innovations in the underlying business processes.

The more organizations learn about their core processes the more they will be able to link such knowledge to redefining market offerings. This, in turn, will make their competitive position stronger and more defensible. Organizations that can intimately integrate their core processes with those of their suppliers and customers often build an even stronger competitive position. Even if we do not directly integrate our core processes with our suppliers or customers we must take care that our own reengineering of core processes is not wasted. Being able to manufacture and deliver a product in one day rather than two weeks may make relatively little difference to the customer who stockpiles product for six weeks. Similarly, reengineering processes providing a service so that far more flexibility is available gives little advantage if the customer cannot comprehend the increased flexibility or make adequate use of it in adding value to his/her own business processes [Brandon and Morris, (1993)].

BPR is therefore about rethinking work from the ground in order to eliminate work that is not necessary and to find better ways of doing work. This dramatic improvement in performance will be determined in various ways: reduced costs, increased speed or improved cycle times, great accuracy. It is about quantum leaps in performances, achieving breakthrough in what matters to the company.

2.5 SCOPE AND SCALE OF CHANGE INITIATIVES

2.5.1 Process Improvement

Yields limited improvements within a department or function

2.5.2 Process simplification

Yields improvements involving more than one department or function but where work is essentially concerned with making what we have got work better. This has the same approach as process improvement only that the scope is wide. Benefits are greater than those of process improvement are but not necessarily large.

2.5.3 Process reengineering

This entails improvements to business. It may include departmental roles and does require changes to organization structure, job design and material / information flow. Many things, almost always including the information systems, need adaptation or replacement for full implementation. The benefits of this are step changes in cost, quality or lead times. Sometimes all three. In this case more emphasis is given to adding value rather than just eliminating no-value added activities; Hence benefits may be more strategic, improving customer perceptions or even changing what the business is able to offer to the market. The distinguishing feature is that the process has been reconceptualised to work in a different way.

2.5.4 Automation

This is a replacement of labour by machines or information technology, which embody the existing process. It is possible to combine automation with process changes but the investment in automation is one of the bigger barriers to reengineering.

2.5.5 Business Reengineering

Working with departmental boundaries has a limited scope and may result to sub-optimization for the enterprise. Even process re-engineering may miss a strategic opportunity. Due to market changes, the business may want to change its focus. At the

business reengineering end of the spectrum the change should be strategic because it changes the way the business works, changes the basis of competition or because the scale of benefit such as cost or lead time is large enough to provide a strategic break over competition.
All the above lie on a continuous spectrum. There are no neat boundaries between categories.

2.6 SCOPE AND DEPTH OF BPR

The focus of BPR in most studies and in the developed world has been on efforts that hardly cross-organizational boundaries, either functional or company wide [Gilberto (1993)]. When organizational barriers are crossed this usually occurs between organizational sub-units or functions rather than company boundaries. Besides the scope, the amount of change is also measured in depth i.e. how many areas the change affects simultaneously. One of the best classifications of factors contributing to depth of reengineering-related change is presented by Hall et al. (1993). It covers roles and responsibilities, required skills and knowledge, organizational structures, shared values, measures and incentives and information systems. Additionally, significant changes in management style or required resources may be good indicators of a deep and dramatical change in the processes as well.

The scope and depth of intended change, or the level of transformation, is closely related to the target process and anticipated level of benefits. Venkatraman (1994) has proposed a classification of different levels of BPR. Evolutionary levels of transformation, that include localized exploitation and internal integration, leverage change enablers either intra-functionally or intra-organizationally, but do not question or significantly change the old course of action. Revolutionary levels of transformation, that include business process redesign, business network redesign and business scope redefinition, incorporate also questioning and changing the current operations. Rationalization of intra- or inter-organizational processes is limited to challenging and restructuring the existing operations without questioning the scope of corporate activities. In the deepest level of revolutionary transformation, the corporation re-examines its core capabilities and operations. By restructuring its activities company eliminates the

unnecessary and outsources the inefficient operations. According to Venkatraman the greater potential benefits can be achieved only on the higher levels of transformation.

2.7 WHY REENGINEER

The driving forces behind re-engineering are the 3C's i.e. customer, competition, and change. When competing initiatives overload the organization, management often tries to protect their people from the whipsaw of shifting priorities. But this wait and see if they are serious this time attitude ultimately destroys the credibility of corporate challenges.

2.7.1 Customer

Customers are more demanding and sophisticated. They demand and expect more alternatives customized services and personal attention. Customers are becoming less brand loyal than in the past and are simply demanding better quality and better prices.

2.7.2 Competition

Due to globalization, global economy offers more customers than ever before. Competition is cutthroat. There is tough competition for the market by both local and international firms.

2.7.3 Change

There are geopolitical realities like European Union, technology customer preferences eg use of Automatic Teller Machine's, getting news and shopping on the Internet. There are priorities from traditional focus on planning, control and managed growth to emphasize speed, innovation, flexibility, quality, service and cost. Only those firms that are ready to confront and master change will thrive.

This is not to say that reengineering is a cure for all ills. The basic symptom, which suggests that reengineering may be called for, is the existence of a large competitiveness gap or an equally large strategic opportunity.

2.8 BPR METHODOLOGY

Davenport and Short (1990) prescribe a five-step approach to BPR:

2.8.1 Develop the Business Vision and Process Objectives:

BPR is driven by a business vision, which implies specific business objectives such as Cost Reduction, Time Reduction, and Output quality improvement, Learning / Empowerment [Nonaka, (1991)]. In developing a business vision one needs to …

1. Assess existing business strategy for process directions
2. Consult with process customers for performance objectives
3. Benchmark for process performance targets and examples of innovation
4. Formulate performance objectives
5. Develop specific process attributes

To develop the vision, people must put aside their old ways of doing things. As a result, they will be able to set a course to make the dramatic changes and improvements necessary for the future. With a clear vision of how things should work in the future, it is then possible to take a hard look at the current business processes and radically change how things are done. Everything is challenged. Work flows, job definitions, management procedures, control processes, organizational structures and even corporate values and culture. Many companies operate to undocumented, old and no longer valid rules. These rules are anchors weighing the firm down and keep the company away from competing effectively for example,

- Small orders must be held until full truckload shipment can be assembled.
- No of orders accepted to provide good customer service.
- Merchandising decisions are made at headquarters.

2.8.2 Identify the Processes to be redesigned:

Most firms use the *High- Impact* approach which focuses on the most important processes or those that conflict most with the business vision. Lesser number of firms use the *exhaustive* approach that attempts to identify all the processes within an organization and then prioritize them in order of redesign urgency.

2.8.3 Understand and Measure the Existing Processes:

For avoiding the repeating of old mistakes and for providing a baseline for future improvements;

1. Describe the current process flow
2. Measure process in terms of new process attributes
3. Identify shortcomings
4. Identify short-term improvements
5. Assess current information technology and organization

2.8.4 Identify IT Levers:

Awareness of IT capabilities can and should influence process design; hence one needs to…

1. Identify potential technological and human opportunities for process change
2. Identify potentially constraining technological and human factors
3. Research opportunities in terms of application to specific processes
4. Determine which constraints will be accepted.

2.8.5 Design and Build a Prototype of the New Process:

The actual design should not be viewed as the end of the BPR process. Rather, it should be viewed as a prototype, with successive iterations. The metaphor of prototype aligns the BPR approach with quick delivery of results, and the involvement and satisfaction of customers. The process steps would therefore be to…

1. Brainstorm on alternatives
2. Assess feasibility, risk and benefit
3. Prototype the new process design
4. Develop migration strategy
5. Implement new organization structures and system.

2.9 IMPLEMENTATION OF BPR PROJECTS

The Davenport and Short (1990) methodology above is design-oriented and gives little advice how to implement the designed and prototyped process in the organization. The lack of widespread debate in implementation issues is surprising since many problems in

reengineering projects seem to surface during this phase. Grover et al. (1995) have studied the risks of BPR and ended up with a classification of the most common risks met in practice. They are related to management support, technological competence, process delineation, project planning, change management and project management

2.10 IMPACT OF BPR

The application of BPR is intended to have a positive impact in the business or organization and to cause it to have quantum leaps in productivity and turnover. However there are other by-products that are inevitable. Below are some changes expected in an entity that applies BPR appropriately:

1. Several jobs or tasks becoming combined with related jobs / tasks
2. Workers become more involved in decision making (i.e. empowerment)
3. The various steps in a process are performed in accordance with the needs of the next process rather than in some predetermined linear form.
4. Process has several versions to deal with differing customer requirements (Flexibility)
5. Work is performed where it makes most sense (i.e. normal boundaries do not apply)
6. A reduction in the number of checks and controls insisted on during the process.
7. The minimization of reconciliation (e.g. of orders) between customers and suppliers.

However, untold and lasting damage to the organization can occur when the reengineering process is used indiscriminately and in a rushed up manner as a blunt cost cutting tool.

2.11 CHALLENGES OF BPR

2.11.1 What can go wrong?

The following problems are typical when implementing process is poorly managed [Hammer and Stanton, (1995)].

2.11.1.1 Analysis

Little time, money and resources for researching leads to poor definition of problems or process that need reengineering. If objective of the implementation are vague and

ambiguous the benefits would be difficult to measure. Sometimes the reengineering project team is not well staffed.

2.11.1.2 Design

Organizational impact analysis has to considered on any change being designed. For example

1. Drastic changes in clerical procedures or staffing planned without checking impact on the organization can be disastrous.
2. Functional specifications inadequately documented
3. Performance evaluation not conducted. No performance standards established as the results of the system are not weighted against the original objectives.

Given challenges of innovation and implementation it is not suprising to find a very high failure rate among business reengineering projects. A series of studies back-up Michael Hammer's observation on a study carried out in 1994, that 70% of all the reengineering projects fail to deliver what the company wants. The Cambridge Massachusetts Consulting firm of Arthur D. Little Inc. in the same year found that only 16% of the 350 business executives surveyed were fully satisfied with the business efforts. Moreover 68% of the executives reported that their reengineering efforts had unintended side effects, creating new problems instead of solving old ones.

In some cases these problems stemmed from management's inability to identify the actual problems to be solved by reengineering or to distinguish between radical and revamping of core business processes and incremental changes. In such cases companies wound up making incremental improvements in on going operations instead of radically redesigning their business processes. In many cases, major hurdles to reengineering were caused by poor implementation and change in management practices that failed to address wide spread change. Deloitte and Touche 1995 findings about the greatest obstacle to BPR were 60% due to resistance to change 40% limitation of existing systems. Also lack of executive consensus- lack of senior executive champion etc. sighted.

2.11.2 What can go wrong? - A Kenyan Case

In 1996 a decision was taken to reengineer and restructure all operations of the Unga Group of Companies, in order to bring them into line with modern business practices and focus more clearly on its core business. Towards this end, the operations of Kenya National Mills Group were divided into three main units namely, Milling operations, animal feeds and edible oils and cereals. To restructure the organization established BPR teams were established and these reviewed all the processes at Unga. They identified issues raised by the internal and external customers. They also identified the opportunities that exist and could be exploited.

Each team was to design business processes to satisfy customer desires. They would produce the following:

1. Process flow diagrams showing activities in sequence
2. Organizational and cultural change implied by the redesign
3. Estimates of the number and type of human resources needed for each activity
4. Recommended key performance indicators to track process improvement i.e.
    1. Technology specification
    2. Cost benefit analysis
    3. Transition plan

From the discussion of the groups two break points were identified:

1. Order fulfillment
2. Procurement

Changes in these processes were expected to trigger competitive prices leading to volume increases and loyalty benefit from customers. The change was to focus on quality, cost, service and reduced cycle time for order fulfillment. The resolution of all the process owners was to listen to the voice of the customer and what makes them satisfied. The vision developed was…

Procurement: Procure grains of appropriate quality at the most competitive price at the same time minimizing wastage, handling costs and ensuring delivery at the right time.

Order fulfillment: To exceed customer expectations 100% all the time.

They established broad performance measures for all processes and would measure success through increased customer satisfaction, leading to loyalty, higher market share and profits.

They looked at issues such as

1. Minimizing hand-off
2. Converting serial processing to paralleled processing e.g. which processes can start before the others are complete.
3. Physical layout e.g. does the work move over unnecessarily long distance?
4. Restructuring the organization e.g. levels of approval.

The restructuring process meant that some jobs were evaluated and where they could be combined and done by fewer people they were changed. These meant some staff had to be retrenched. For example, the Unga feeds a subsidiary of the Unga administered tests to 41 secretaries from whom they were to select 25 and declare the rest redundant. Many experience middle level managers were also laid off at the expense of the younger newly employed managers.

The outcome of the reengineering process was not favourable. It became quite evident during the year that certain basic management fundamentals had been overlooked. Some of the negative unexpected outcomes were that experience levels were drastically weakened in a number of key business areas, most notably production and distribution. Some of the reasons have been sighted for the failures in the process are:

1. The change agent instead of remaining as a consultant so as to bring objectivity in the decision making process was eventually employed as the managing director.
2. The reengineering and restructuring process was not effectively communicated to the staff and most people were demoralized. This led to production drastically reducing as staff who were in a state of fear and anger downed their tools in protest to the changes. This obviously implies that transition or management of change was not done effectively.
3. Some of the processes were not well analyzed and redesigned. Sufficient testing or prototyping of the new processes was not well done. For example, the number of drivers was drastically reduced and the number left proved to be insufficient. The

drivers are key staff in the company since they are used to distribute the products, the company had to subcontract others when there was demand. This proved to be more expensive and unreliable.

4. Overstocking due to poor reading of market dynamics.

However, all is not lost since the company is committed to the basic principles of the change program. It is taking steps to ensure that the group has in place cadre of professional managers who are well experienced in their core operations. Production systems have also been thoroughly examined and changes made to improve both efficiency and quality.

We've had of successful BPR cases by the Kenya Power and Lighting Company whereas University of Nairobi has recently been rethinking its processes. The appointment of vice chancellors and college principles by the president is being questioned. The university suggests that these positions be filled through competitive interviews. Another area being considered is in regard to restructuring of colleges, faculties and departments. There has been a duplication of faculties and this has led to inefficient use of resources. The university knows that it will achieve better efficiency and synergy through the restructuring. These are yet to hatch and hence proper study is required if reengineering is to be considered. These changes are critical especially in these difficult economic times when even the government allocations, which used to finance this inefficiencies are no longer available.

2.12 WHERE IS BPR HEADED?

Over the last few years, the reengineering concept has evolved from a "radical change" to account for the contextual realism [Caron et al, (1994), Earl, (1994)], and to reconcile with more incremental process change methods such as TQM, towards a broader, yet more comprehensive process management concept [Davenport, (1993)].

Based upon a theoretical analysis and survey of literature relevant to reengineering, Kettinger & Grover (1995) outline some propositions to guide future inquiry into the phenomenon of BPR. Their propositions center on the concepts of knowledge management, employee empowerment, adoption of new Information Technologies, and a shared vision. Earl (1994) proposes a "process alignment model" that comprises four lenses of enquiry: process, strategy, MIS, and change management and control, and used

it for developing an inductive taxonomy of BPR strategies. Davenport believes that process reengineering, in some form or known by some other name would be of enduring importance.

2.13 THE GLOBAL PHARMACEUTICAL INDUSTRY

The origin of the Pharmaceutical industry are primarily post war and during that time is has been driven greatly by technological innovation. For example discovery of Tetracycline by Pfizer and Lederle in the 1950's led them to becoming number one and two in the market. There is a progression of drugs that have made or broken companies over time e.g. beta blockers discovered by ICI, SmithKline Beecham was based on the success of Tagamet while Zantac formed the success for Glaxo. [Johnson, (1996)] Technological new product success has therefore fueled the growth of the industry. However this is not enough.

In the United Kingdom, the industry was one which achieved its profitability through constant production of minor product improvements or 'me-too' adjustments and strong marketing and selling financed the breakthrough Research and Development discoveries. In the 1980's the industry was driven by premium priced product improvements. This meant that the price of products kept increasing year on year hence consumers resulted to using generic products. In the 1990's the market for the pharmaceutical products became price sensitive. Competition is now stiff as it is no longer viable to introduce 'me-too' products at premium price because they simply won't sell. Companies have there put in measures to increase productivity and contain cost through reengineering. [Johnson, (1996)].

2.14THE KENYAN PHARMACEUTICAL INDUSTRY

Before getting to the Pharmaceutical industry in Kenya, it is wise to look at the Kenyan Economy as a whole. The business week magazine of the Daily Nation dated 19th September 2000 indicate that the Kenyan economy at the moment is characterized by the following…

1. A GDP of 0.26% in the year 2000

2. Per capita income $280
3. Decline in manufacturing output
4. Decline in savings and investments
5. Insecurity
6. Political uncertainty

Whereas the market dynamics as indicated in the September 26th edition are characterized by…

1. Rapidly declining disposable incomes
2. Retrenchments
3. Massive crop failure since 1984
4. Collapse of agriculture and tourism
5. Disintegration of key processes namely infrastructure and healthcare
6. HIV aids pandemic 500 deaths a day
7. Down trading, substitution is rampant

Due to liberalization of the economy, local firms, which used to operate in a controlled environment, are now facing competition from foreign products. Therefore these firms have had to adapt to change to survive. The Pharmaceutical industry is not spared from this.

It is wise to note that the cost of essential drugs is exorbitantly high in the developing countries as compared to the cost of the same in developed countries. We've had about process improvements and quality through standards in our industry, however little has been said about reengineering

Why the Pharmaceutical industry? It is crucial that we get affordable essential drugs in the country. With the deteriorating healthcare provisions this is mandatory as more and more people are moving towards self-medication. This therefore implies that the product has to be efficacious, affordable and easily available.

On the preface of drugs and chemists guide price list of July/August 2000, the publisher James Bett notes that the high cost of drugs must be addressed. He states, "despite the cost of essential drugs being costly in developing countries than in the

developed countries, the pharmaceutical companies in Kenya have not come up to explain this discrepancy. This situation should not be allowed to continue and must be addressed urgently"

The drug and chemists guide 2000 focus is on government intervention to ensure that the essential drugs are affordable and accessible to all. It states that the government should invoke the law of parallel importation, such that an importer can purchase any drug from the cheapest country. What does this therefore do to the Pharmaceutical Manufacturers in Kenya, It implies that those who have not looked at their processes are thus forced to relook into the them with a view of enhancing efficiency and improve productivity. This implies that processes that are not value adding will have to be done away with or changed completely hence reengineered.

In addition, the same guide insists that the government should introduce compulsory licensing so that any manufacturer can be licensed to make a particular drug locally. Even though this may look good, cost of goods will be a subject of discussion if this is to materialize.

A study carried in Finland looking at the state of Reengineering in Finland in comparison to that of USA and Europe indicate that according to CSC Index more than 70 per cent of American and European large companies had adopted business process reengineering as a means to improve their operations. [Jukka et al, (1995)] Similarly as many as 88 per cent of large corporations in the USA were already using business processes reengineering or were about to start BPR projects. Reengineering has been utilized more often in manufacturing industries than in service industries, except in insurance and banking sectors. Frequent use of BPR is, at least partly, a result of several success stories that have shown even 70 per cent savings in time and costs. High potential benefits have tempted companies to adopt reengineering, despite the likelihood to fail in undertaking. Some researchers have estimated the failure rate to be even as high as 70 per cent. In the face of increasing costs, competition, internal operational problems, and declining profits, the risk seems to be acceptable.

Based on the analysis of 32 BPR projects in Finland it is obvious that there is huge diversity among the initiatives. Most of the projects were focused on streamlining

current business processes, while only in few cases the business was redesigned. The analysis shows that the drivers behind the studied projects were also different. Internal inefficiency resulted in traditional BPR projects, changing customer/supplier needs yielded to diversified business processes and external and uncontrollable incidents required broader analysis and change of business and operations strategies [Jukka et al, (1995)].

The results of the above study prompted this study based on the Pharmaceutical Industry in Kenya. This replicate study though on a smaller scale focusing on the Pharmaceutical industry rather than the whole economy aims to unearth the following…

1. Will the Kenyan Pharmaceutical manufacturing firms exhibit the same characteristics as those in Finland, USA or Europe?
2. There are differences between the manufacturing industry in Finland and that of Kenya. How do these differences in the environment affect or contribute to the findings in Kenya as we talk of Power and water rationing, escalating fuel prices, collapsing infrastructure, rapidly decreasing disposable incomes, etc. How do this contribute to the change processes in the Pharmaceutical manufacturing industry? Are we bound to realize the same results as compared to Finland, USA and UK despite the different environment we are operating in?

It is the above that justify this replicate study since the Environment in Finland was characterized by large companies merging and reorganizing of their operations. In addition, the large wholesale companies were reorganizing their logistics, penetrating the markets of former Soviet Union and preparing for the hard competition after Finland joining European Union in 1995. It is also wise to note that at the time of the study, most companies in the sample were financially in relatively good shape and not forced to initiate any all-or-nothing, high risk endeavors.

Business Process Reengineering (BPR) has been embraced by business organizations as an approach to implement and manage change all over the world. Managers are being trained to apply several concepts and techniques to successfully manage the change process. However, there is little empirical evidence to support claims of the effectiveness of concepts and techniques in practice.

Many successful business Process-reengineering cases have been presented both in management and scientific journals. It has been repeatedly claimed that BPR has on one hand resulted in dramatic improvements in performance, but on the other hand there has also been many failures [Brandon and Morris, (1995)]. However systematical studies on the drivers of BPR initiatives and reasons for success and failure have been scarce.

Frequent use of BPR is at least partly as a result of success stories that have shown 70% savings in time and costs [Belmonte and Murray, (1993)]. High potential benefits have tempted companies to adopt reengineering, despite the likelihood to fail in the undertaking. In the face of increasing costs, competitive demand, internal operational problems and declining profits, as is evident in Kenya now, the risks involved in BPR seem to be acceptable.

There are many opportunities making BPR of great importance to the Pharmaceutical industry. We have experienced mergers and acquisitions, restructuring efforts for example Glaxo and Wellcome to for Glaxo Wellcome, SmithKline Beecham acquired Sterling Health, Hoechst Marion Rousel and Rhone Poulenc to form Aventis etc. which are common in the industry. High level of education, high labour costs, recession and consequently required cost savings as well as hard competition is forcing companies to actively utilize possibilities offered by BPR.

Since the frequency of reengineering initiatives in the Pharmaceutical manufacturing firms in Kenya is unknown, the aim of the study is to survey the frequency of BPR and type of processes companies have identified or reengineered. The study will indicate of the level of application of BPR in the Pharmaceutical Manufacturing Firms in Kenya, the drivers, scope, implementation and success of changes made to target processes. The focus is be on manufacturing processes and services associated to manufacturing. The study therefore seeks to answer the following question…
To what extent has BPR been applied in the Pharmaceutical Manufacturing firms in Kenya and what are the experiences of the companies that have engaged in BPR?

CHAPTER 3

RESEARCH METHODOLOGY

3.1 RESEARCH DESIGN

The type of data is non-causal hence one cannot draw inferences or if drawn would be very weak. The source of data is primary, since the researcher administered a questionnaire to the respondents.

3.2 DATA COLLECTION

The tool for collecting the data is as detailed in Appendix 1. This contains 3 sections as follows…

Section 1:	Contains seven general questions about the company surveyed
Section 2:	Contains seven preliminary questions checking type of changes that have been initiated in the Pharmaceutical Manufacturing industry in Kenya. A review of Literature on BPR led to the compilation of this focus on changes.
Section 3:	Looks in detail on organizational changes and impact. This section combines use of a 5 scale Likert-type, closed ended as well as open ended questions and focuses solely on BPR initiatives.

Data was collected via a questionnaire administered by a research assistant. The respondents were given the questionnaire to fill and these were then collected and analyzed. Refusals and non-response have totaling to two have therefore been ignored for data analysis.

3.3 POPULATION

The population of interest in this study includes all the Pharmaceutical manufacturers in Kenya. A list of the Pharmaceutical manufacturers as compiled by the Ministry of

heath: - Pharmacy and poisons board in conjunction with the ministry of Tourism Trade and Industry indicate that 16 pharmaceutical manufacturing firms have renewed their licenses of operation for the year 2000. However the registrars office indicate that 25 pharmaceutical companies are registered to manufacture Pharmaceuticals in Kenya. The researcher therefore went by the list of 25 companies and got feedback from the 16 companies in operation and 2, which are winding up their operation in Kenya. The researcher only managed to locate 20 companies whereas the other five only had their sales and marketing offices operational. Hence ignored. However two companies refused to respond to the questionnaire and hence not included in the study.

3.4 DATA ANALYSIS

The questionnaire was analyzed through the use of percentages and results have been presented by use of tables and graphs.

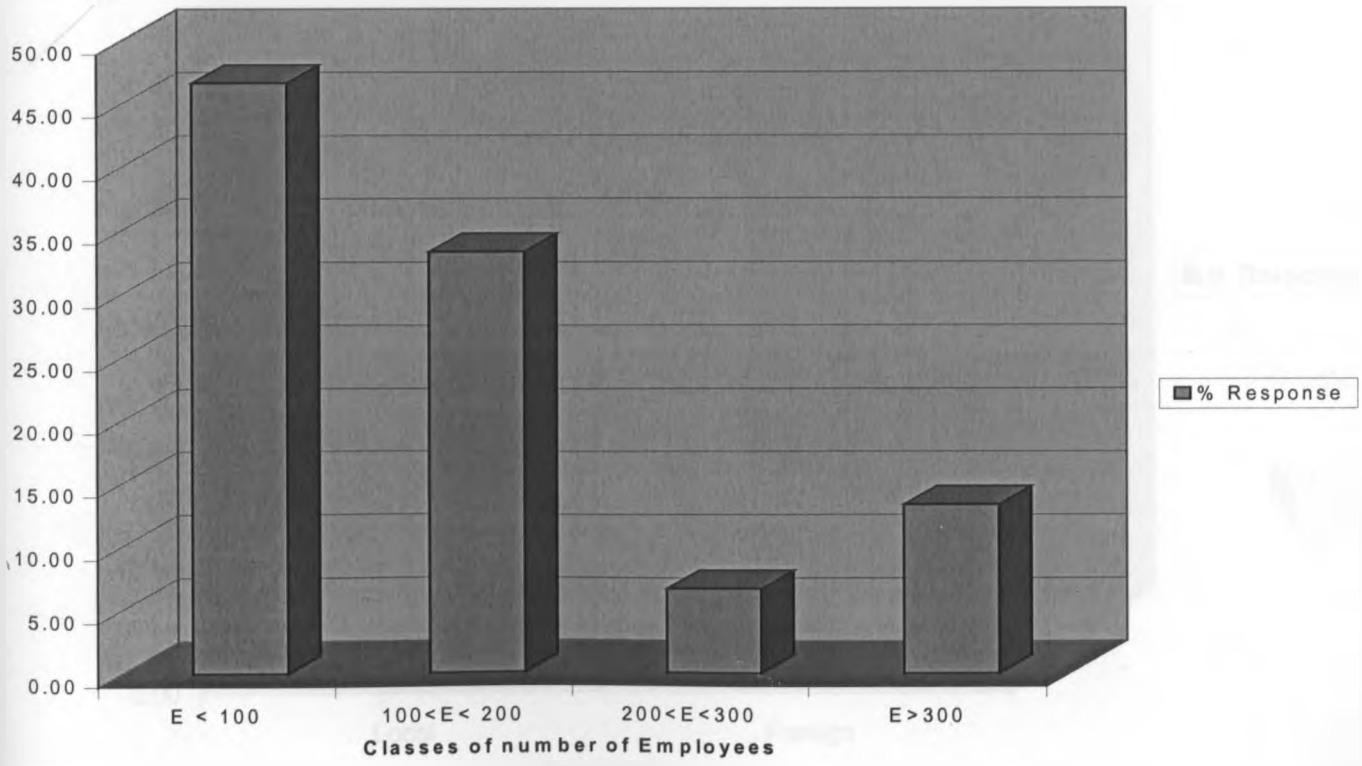
CHAPTER 4

DATA ANALYSIS AND RESEARCH FINDINGS

4.1 GENERAL INFORMATION

Table 4.1.1: Profile on number of employees in the Pharmaceutical Manufacturing Firms in Kenya

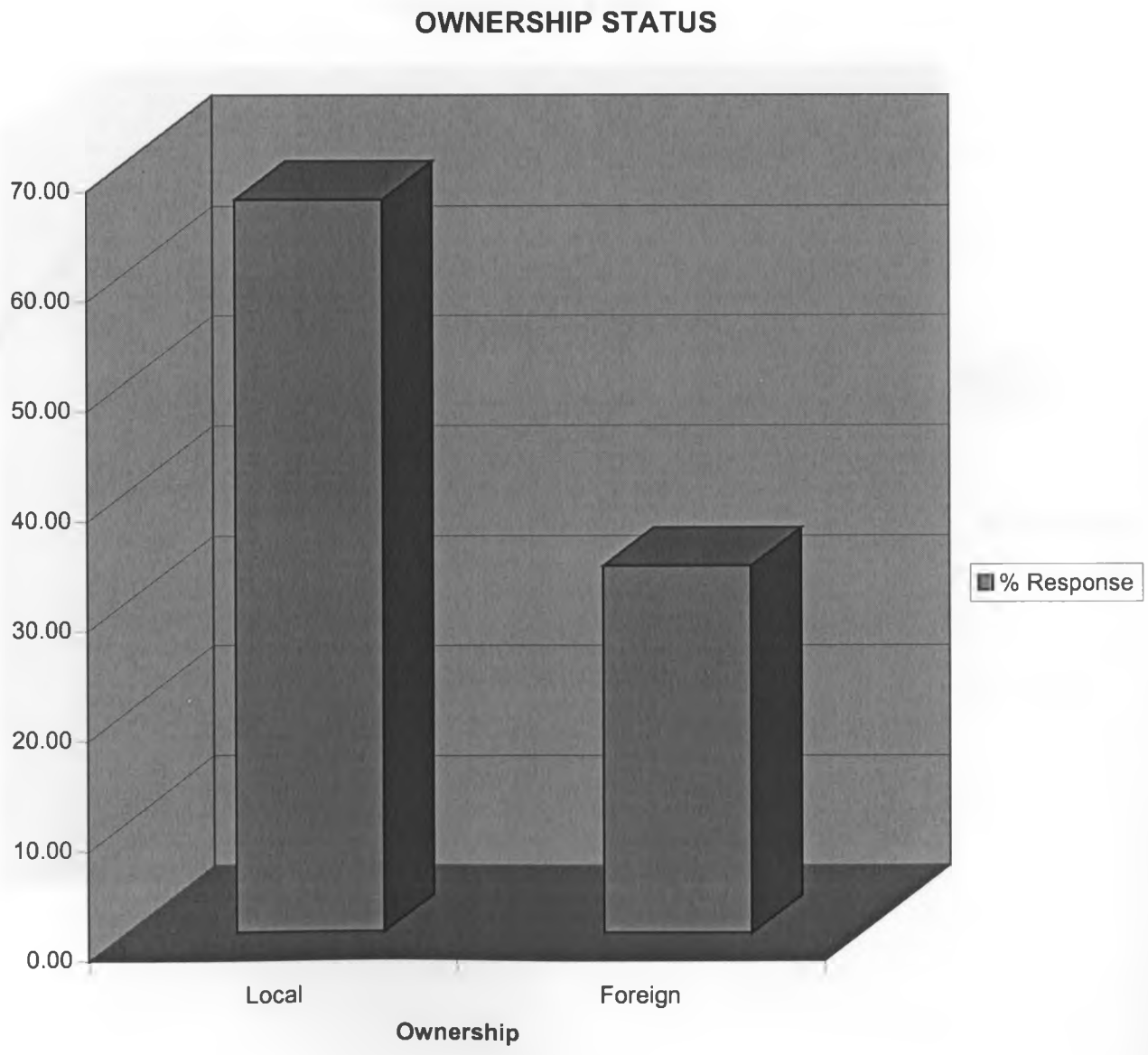
Employees	% Response
E < 100	46.67
100<E< 200	33.33
200<E<300	6.67
E>300	13.33
TOTAL	100



From the above, it can de deduced that most Pharmaceutical manufacturing firms in Kenya have less than 100 employees.

Table 4.1.2: Ownership status

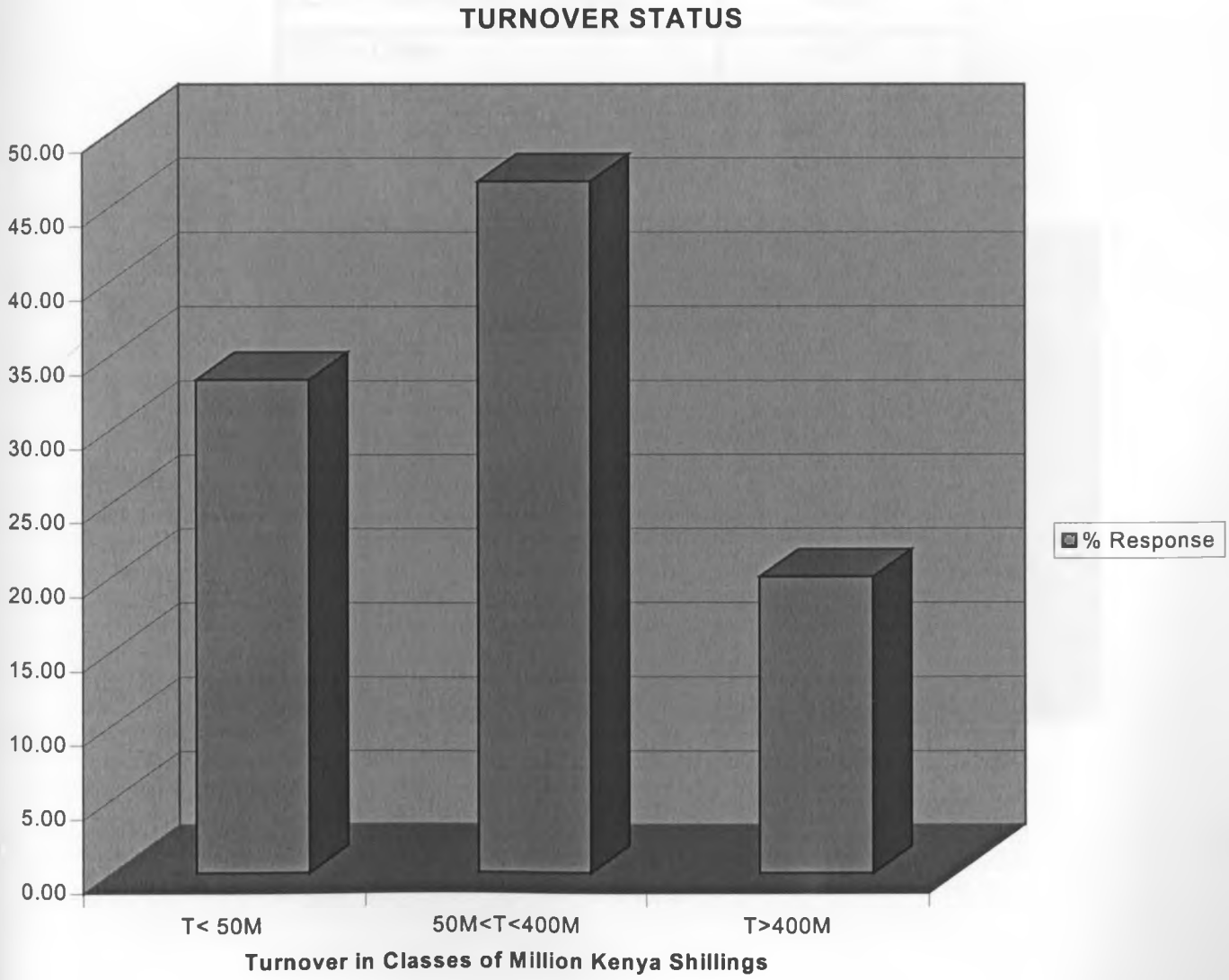
Ownership	% Response
Local	66.67
Foreign	33.33
TOTAL	100



From the above we can deduce that most of the companies have local ownership whereas a small percentage are foreign owned.

Table 4.1.3: Turnover status

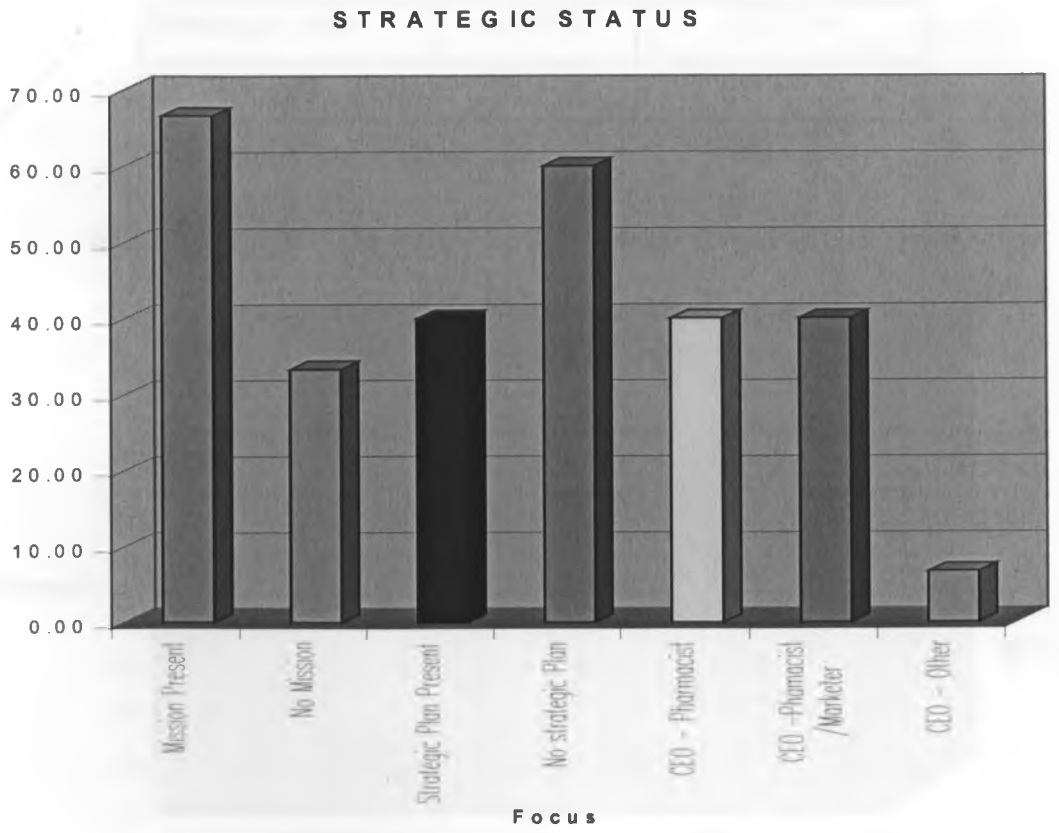
Turnover	% Response
T< 50M	33.33
50M<T<400M	46.67
T>400M	20.00
TOTAL	100



47% of the companies have a turnover of between 50 and 400million while 33 % have a turnover of less than 50 million. 20% have a turnover of over 400million and this is majorly dominated by the foreign owned companies.

Table 4.1.4: Strategic status

Component	% Response
Mission Present	66.67
No Mission	33.33
Strategic Plan Present	40.00
No strategic Plan	60.00
CEO - Pharmacist	40.00
CEO -Pharmacist /Marketer	40.00
CEO - Other	6.67

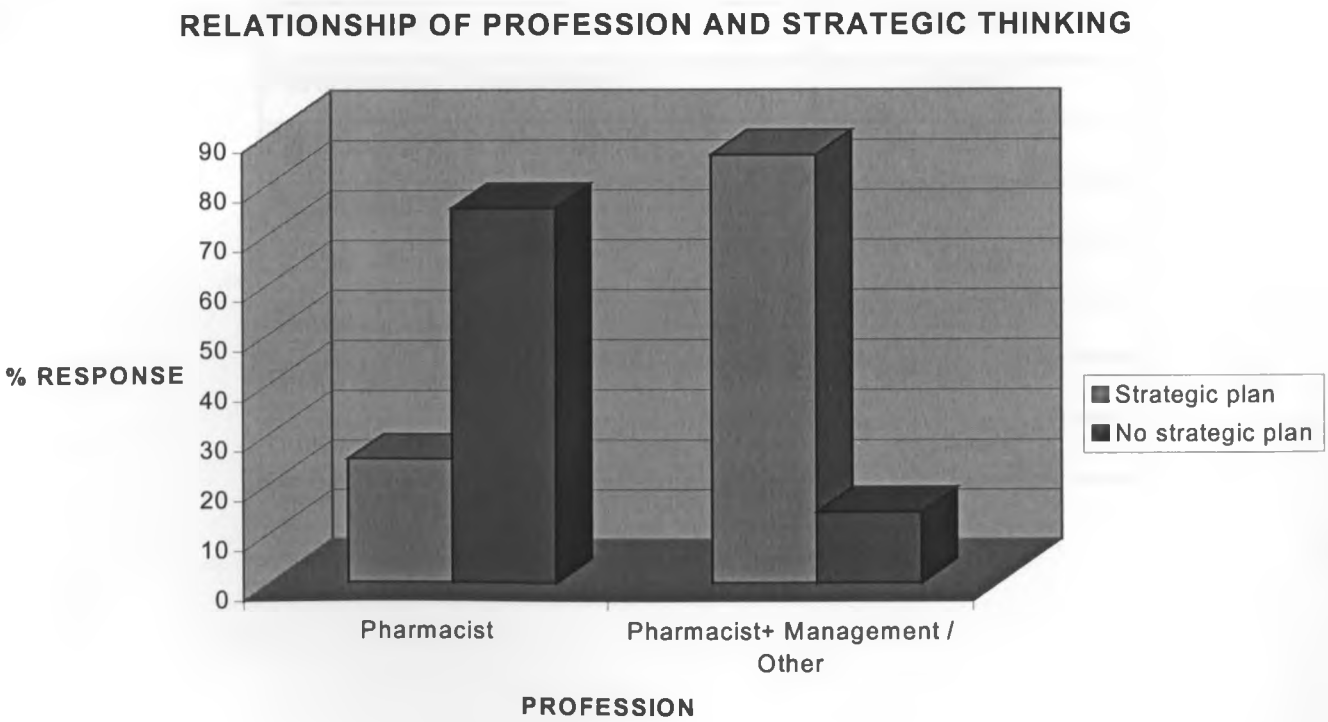


33% of the companies surveyed have no mission whereas 60% have no strategic plan. This therefore indicates that though most companies have a mission, they have no clearly chatted path of achieving their mission. Apparently all foreign owned companies have strategic plans and this may be due to this being a requirement by their mother companies.

Additionally most CEO's in this Industry are Pharmacists and those who have augmented this with a management coupling have steered their companies to be forward looking, this can be seen from the cross tabulation below.

Table 4.1.5: Cross-tabulation of Profession versus Strategic Thinking

	Pharmacist	Pharmacist + Management / Other
Strategic plan	25.00%	85.71%
No strategic plan	75.00%	14.28%



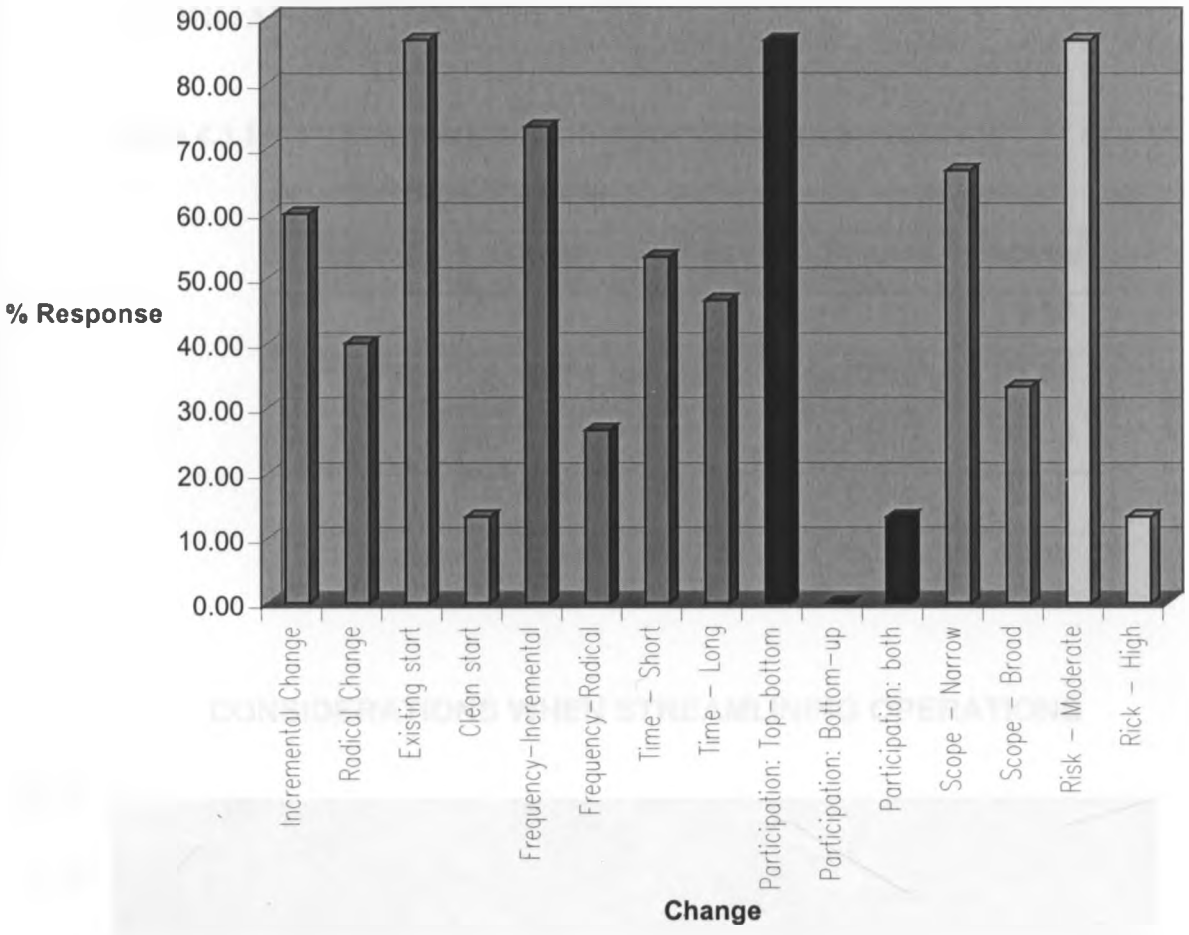
This indicates that from 85% response that those companies with a strategic plan are those whose CEO's have augmented the basic Pharmacy or first degree with some management barking

4.2 PROCESS IMPROVEMENT VERSUS PROCESS INNOVATION (BPR)

Table 4.2.1: General Trend of Change

Improvement versus Innovation	% Response
Incremental Change	60.00
Radical Change	40.00
Existing start	86.67
Clean start	13.33
Frequency-Incremental	73.33
Frequency-Radical	26.67
Time - Short	53.33
Time - Long	46.67
Participation: Top-bottom	86.67
Participation: Bottom-up	0.00
Participation: both	13.33
Scope - Narrow	66.67
Scope - Broad	33.33
Risk - Moderate	86.67
Rick - High	13.33

IMPROVEMENT VERSUS INNOVATION



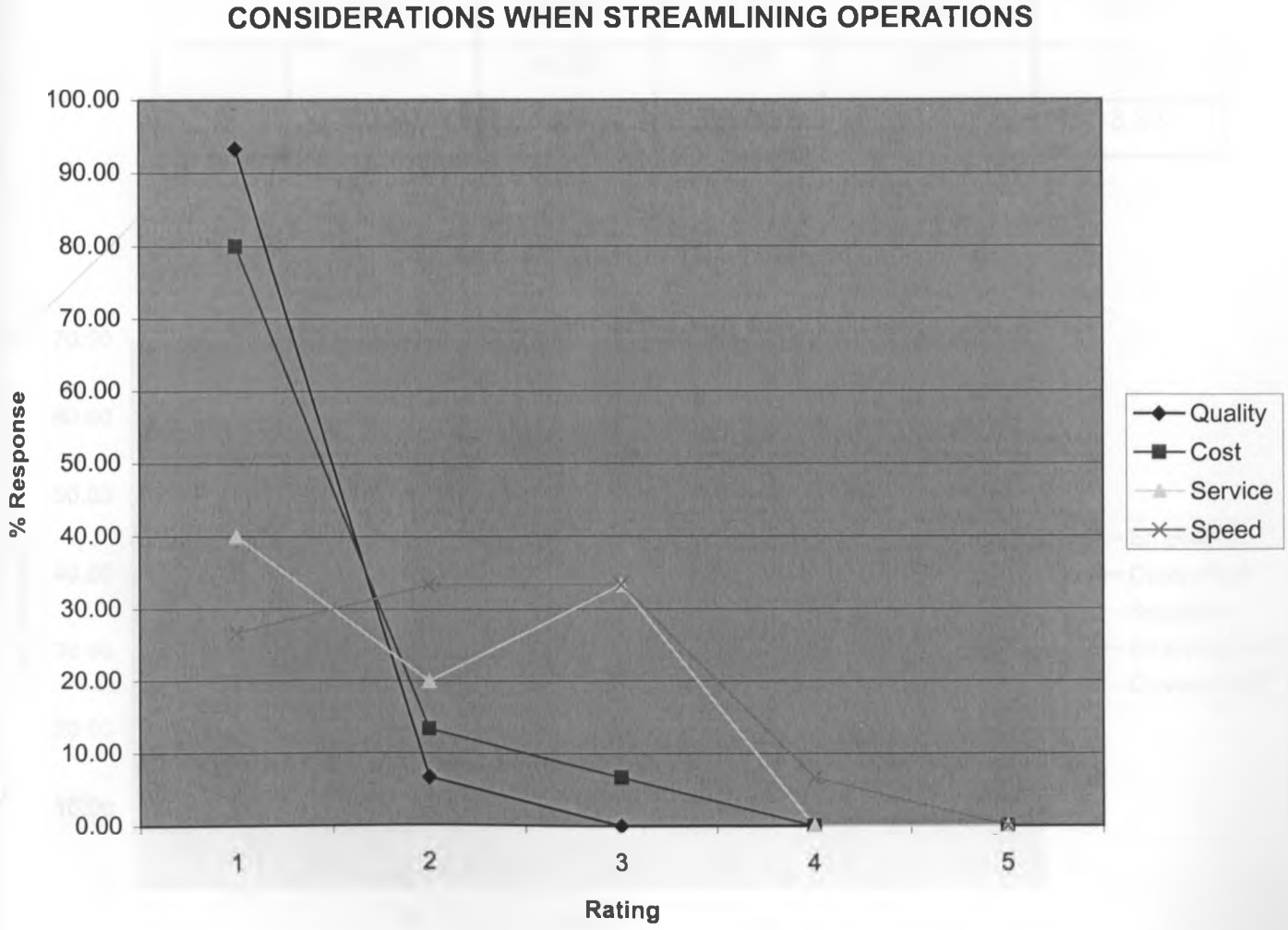
Looking at the general trend of change that has taken place within the Pharmaceutical Industry, most of these changes lean towards process improvement initiatives rather than innovation (BPR). This is seen by the fact that 87% start on an existing point whereas only 13% have a clean slate start. Further more incremental change is much more common than radical change. This therefore implies that the industry is still content with the process improvement initiatives, which are probably yielding fruit and have not been pushed to the edge enough for them to consider reengineering as key. However there could be mixed reactions here as one can state that this imply Pre-BPR activities as well.

4.3 ORGANISATION CHANGES

Table 4.3.1: Considerations when streamlining operations

(1 = High, 5 = Low)

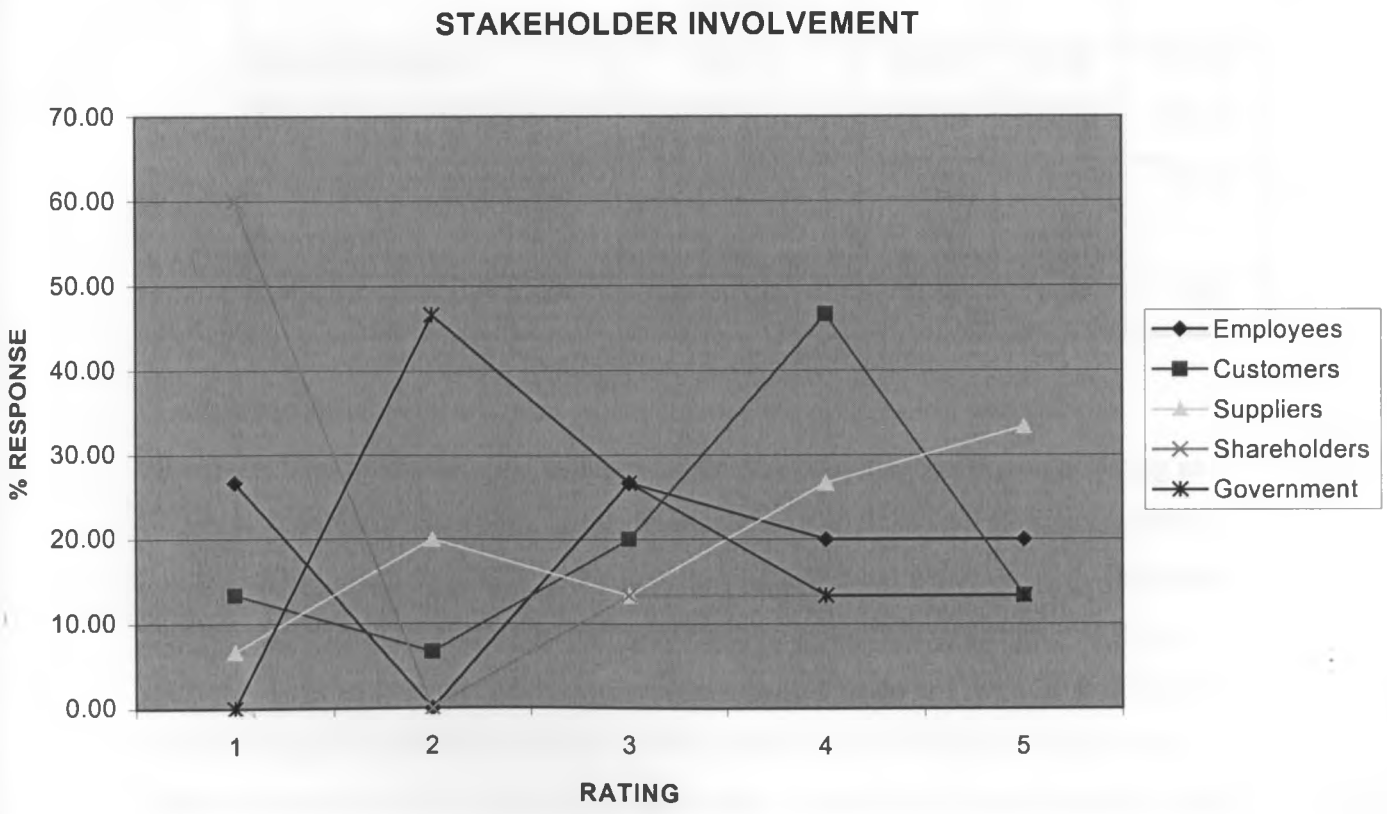
Rating	Quality	Cost	Service	Speed
1	93.33	80.00	40.00	26.67
2	6.67	13.33	20.00	33.33
3	0.00	6.67	33.33	33.33
4	0.00	0.00	0.00	6.67
5	0.00	0.00	0.00	0.00



The two most lauded considerations were quality and cost. Though the others were looked at they did not score as highly as the two mentioned. The highest focus was however on quality and this is by mere fact of the nature of the industry. Cost is also paramount by the mere fact that the living standards and the economy as a whole is deteriorating and hence consumers are becoming price sensitive whereas the business has to make profits to survive.

Table 4.3.2: Stakeholder Involvement
(1 = High, 5 = Low)

Rating	Employees	Customers	Suppliers	Shareholders	Government
1	26.67	13.33	6.67	60.00	0.00
2	0.00	6.67	20.00	0.00	46.67
3	26.67	20.00	13.33	13.33	26.67
4	20.00	46.67	26.67	13.33	13.33
5	20.00	13.33	33.33	13.33	13.33



Apparently 60% of the companies identified shareholders as being the key stakeholders. This goes hand in hand with the fact mentioned earlier that 67% of the companies are locally owned and the shareholders form part of the management team. Additionally the Government stands out to be another key stakeholder and this is due to the fact that the Prime customer for most of the locally owned Pharmaceutical firms is the Government. The industry also works very close with the government due to the nature of the products produced. Other customers are involved though to a lower extent and most of the time they are not actively involved in the reengineering activities. Customer needs are rather considered implicitly in operative efficiency than expressed explicitly in distinct requirements.

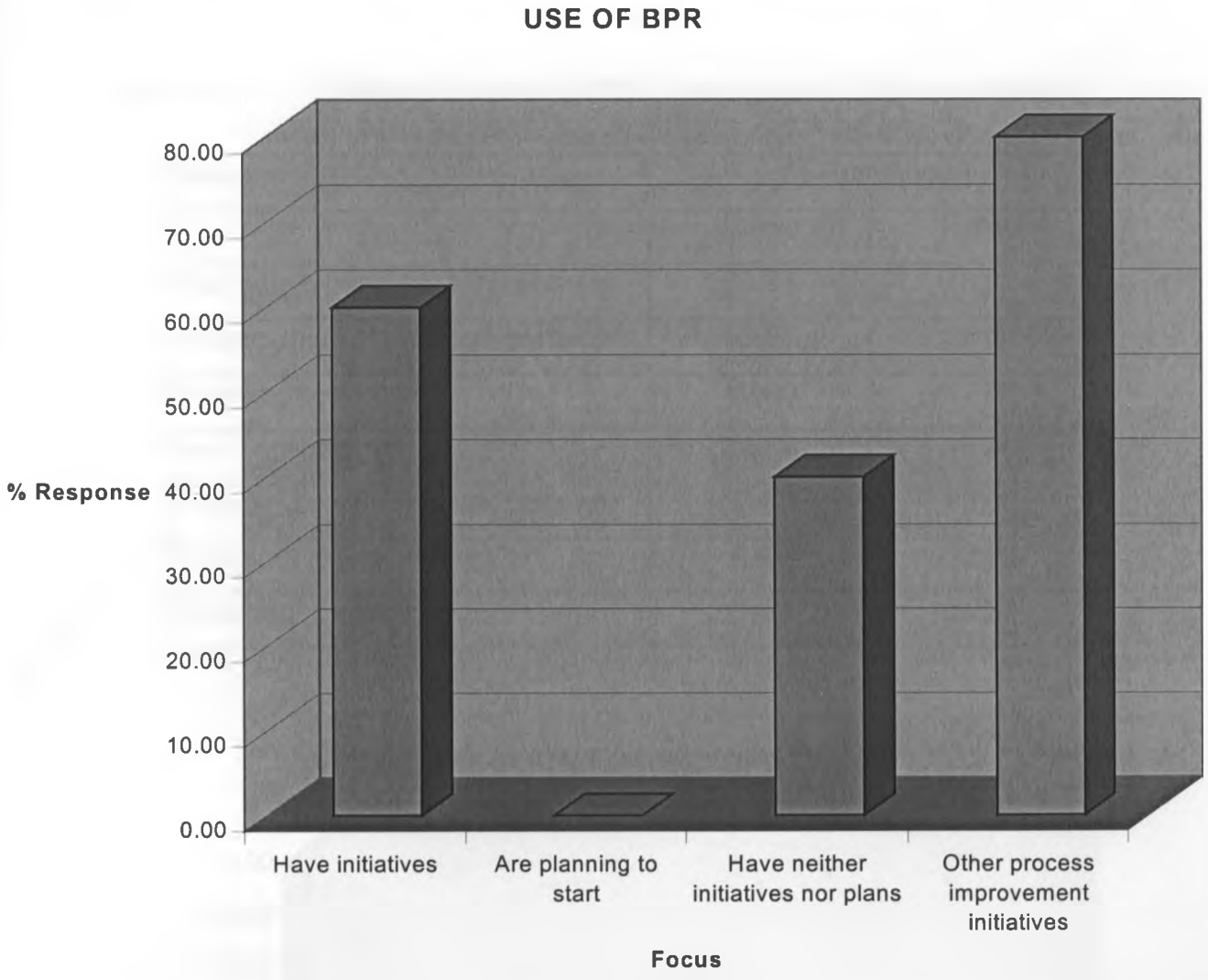
Table 4.3.3: Use of BPR: Comparative to Finland, Europe, USA [Jukka et. al (1995)]

Focus	% Response			
	Kenya Pharmaceutical manufacturing Industry	Finland Industry Average	Europe Industry Average	USA Industry Average
Have initiatives	60.00	68.00	75.00	69.00
Are planning to start	0.00	22.00	15.00	16.00
Have neither initiatives nor plans	40.00	10.00	10.00	15.00
Total	100	100	100	100

Considering that Kenya is a third world country the expectation was that the Pharmaceutical Manufacturing Industry in Kenya has not adopted reengineering as frequently as their counterparts in the developed world. In Kenya all foreign owned companies are practicing BPR hence just ascertaining what was expected. This could also be due to the size of the company the companies that are practicing BPR are relatively large in turnover and personnel than those that do not have BPR initiatives. On inquiring the reasons for not having BPR initiatives, 66% indicated that they lacked experience in the field. It is however wise to note that though the questionnaire was directed to the operations managers, 70% of the locally owned firms directed us

to the chief executives to fill in the questionnaire, claiming they were not empowered to fill such questionnaires.

From the graph above however we can see that 80% of the Pharmaceutical manufacturing Industry have process improvement initiatives. This implies that these initiatives are therefore yielding results and has not reached a point where there is



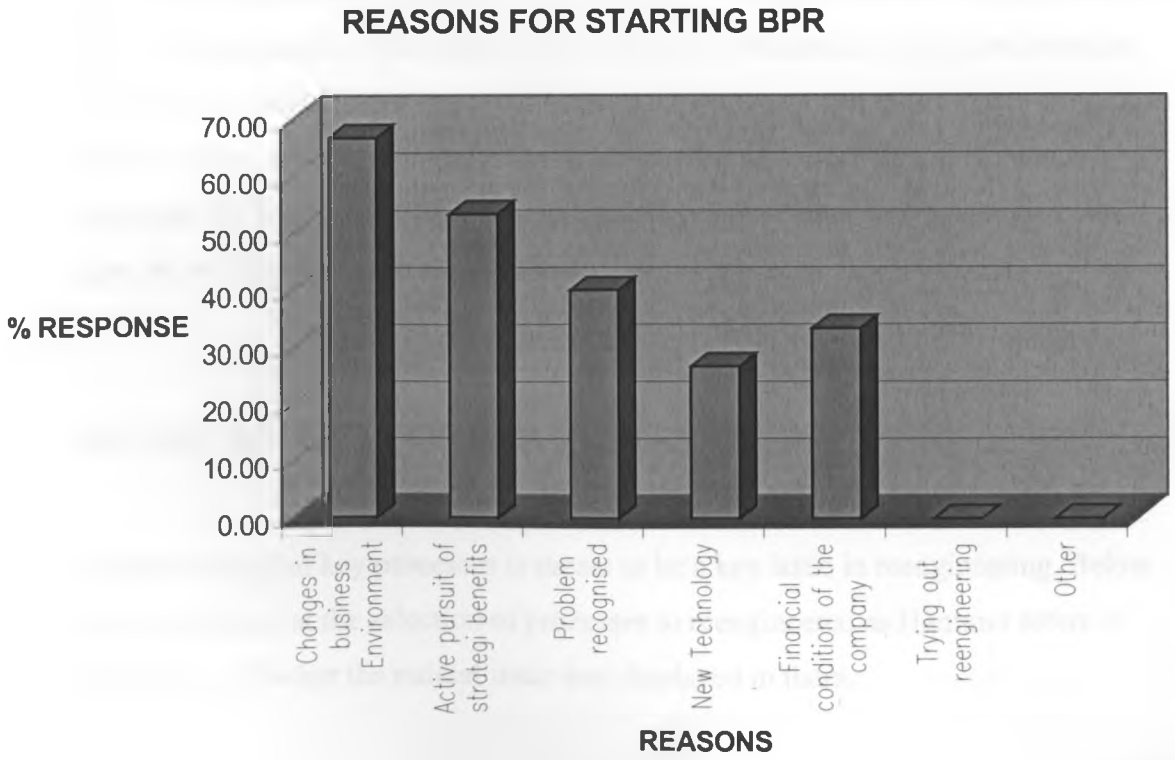
sub-optimization for the companies to take reengineering seriously. It is on this note that the researcher is justified to say that reengineering in the Pharmaceutical manufacturing industry in Kenya does not run in isolation but in parallel to other process improvement initiatives, which are also bound to be confused for reengineering initiatives.

4.4 EXPERIENCES FROM BPR PROJECTS

In this section and the following ones, the researcher focused on only those companies which had reengineering initiaves. These were only 10 companies constituting 60% of the companies that responded to the questionnaires.

Table 4.4.1: Reasons for starting BPR: Comparative to Finish companies

Reasons	% Response	
	Kenya	Finish
Changes in business Environment	66.67	78.00
Active pursuit of strategic benefits	53.33	59.00
Problem recognized	40.00	47.00
New Technology	26.67	45.00
Financial condition of the company	33.33	25.00
Trying out reengineering	0.00	12.00
Other	0.00	9.00



Literature indicates that BPR has originally been presented as a unique concept with great expectations that might also explain its popularity. Unfortunately my findings do not support this view since none of the respondents answered that trying out reengineering concepts and methods was one of the reasons for starting the project.

More cautious estimates see BPR as an answer to turbulent business environment that enforces companies to take up this initiative. This looks true as most of the companies as shown above report changes in business or competitive environment as the main reason for starting BPR. There is also a proactive undertone, as companies seem to pursue strategic benefits rather than react to problems in business. All this is in line with the finding form the Finish companies [Jukka et. al (1995)]

It however seems that technology enabled nature of reengineering has gained support however to a lower extent 27% response. This can be explained by the fact that being a third world country, we almost adopt what has been tried and tested elsewhere and hence minimal work is required to adopt the technology apart from restructuring personnel.

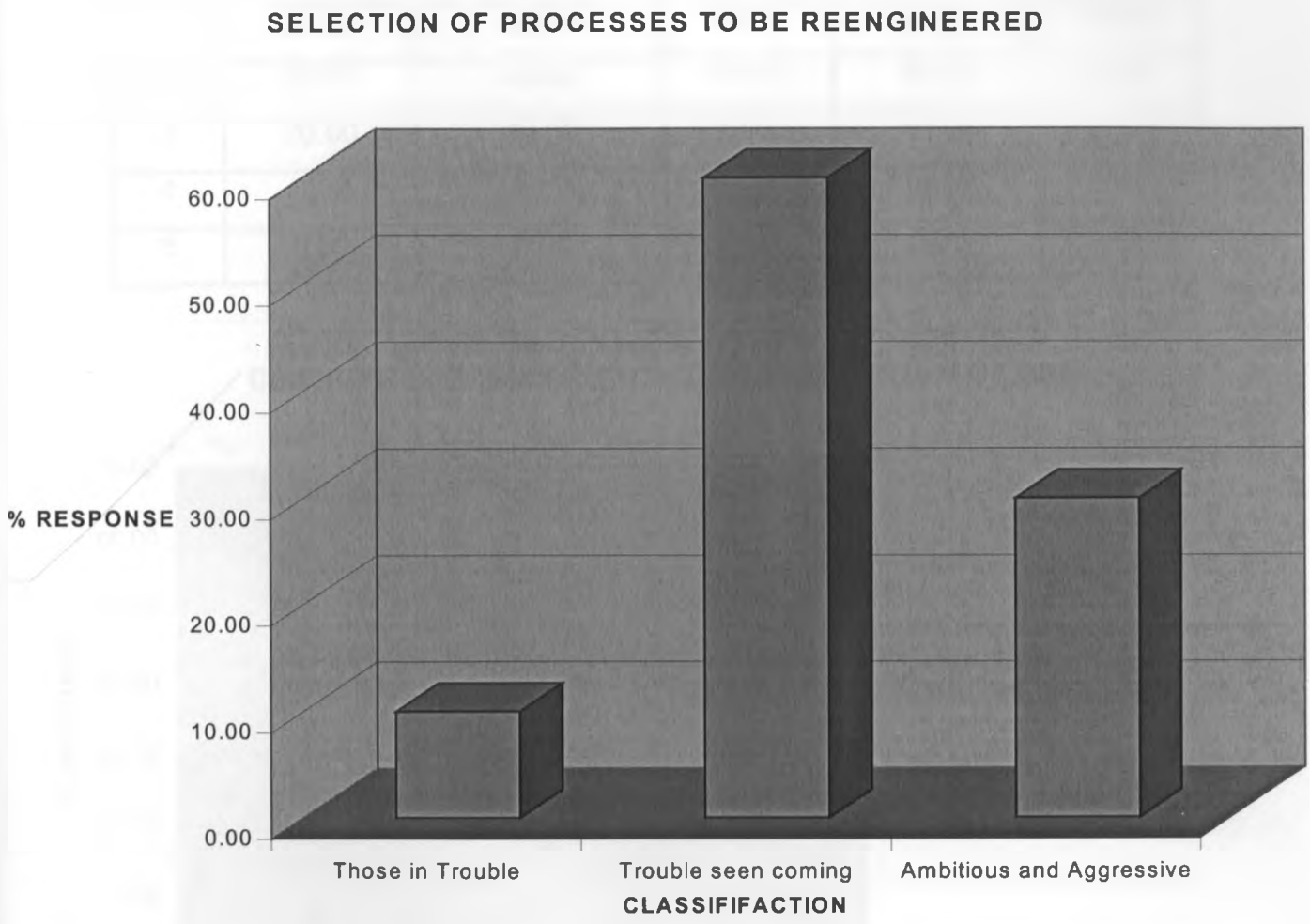
33% of the firms gave financial reasons being behind their BPR initiatives and this goes hand in hand with problems recognized in a business process. This note should not be taken lying down as some of the companies within this survey are bound to close their operations in Kenya within the next two years due to the above conditions. We are seeing most companies moving base to South Africa, Egypt, etc which indicates that by the time the financial situation or problems are being sorted out, it may be too late to salvage the situation.

4.5 KEY ASPECTS OF BPR

Radical change of key processes is meant to be a key issue in reengineering, Below we have looked at the selection of processes to reengineered as Hammer refers to them to see whether the radical issue was displayed in them.

Table 4.5.1: Selection of Processes to be reengineered

Selection of Processes to be reengineered	% Response
Those in Trouble	10.00
Trouble seen coming	60.00
Ambitious and Aggressive	30.00
TOTAL	100



According to the data above only 30% of the companies surveyed indicated that their selection of those processes to be reengineered were ambitious and aggressive undertakings. 60% saw trouble coming. Despite the above, the information got from the companies indicated that they considered these radical because they occurred simultaneously in several other areas such that roles and responsibilities changed, and there were clear measures and incentives. More so organization work methods

improved (see table 4.6.2). However the radical impact was only radical in the context of individual projects whereas overall impact was minimal and the changes did not result in major changes in operations.

Table 4.5.2: Changes experienced on Implementation of BPR

Rating	Clear measures and incentives	Clear roles and responsibilities	Enhanced skills and values of workers	Improved management style	Improved org. working methods
1	30.00	60.00	30.00	20.00	50.00
2	50.00	30.00	40.00	30.00	40.00
3	20.00	10.00	20.00	40.00	10.00
4	0.00	0.00	10.00	10.00	0.00
5	0.00	0.00	0.00	0.00	0.00

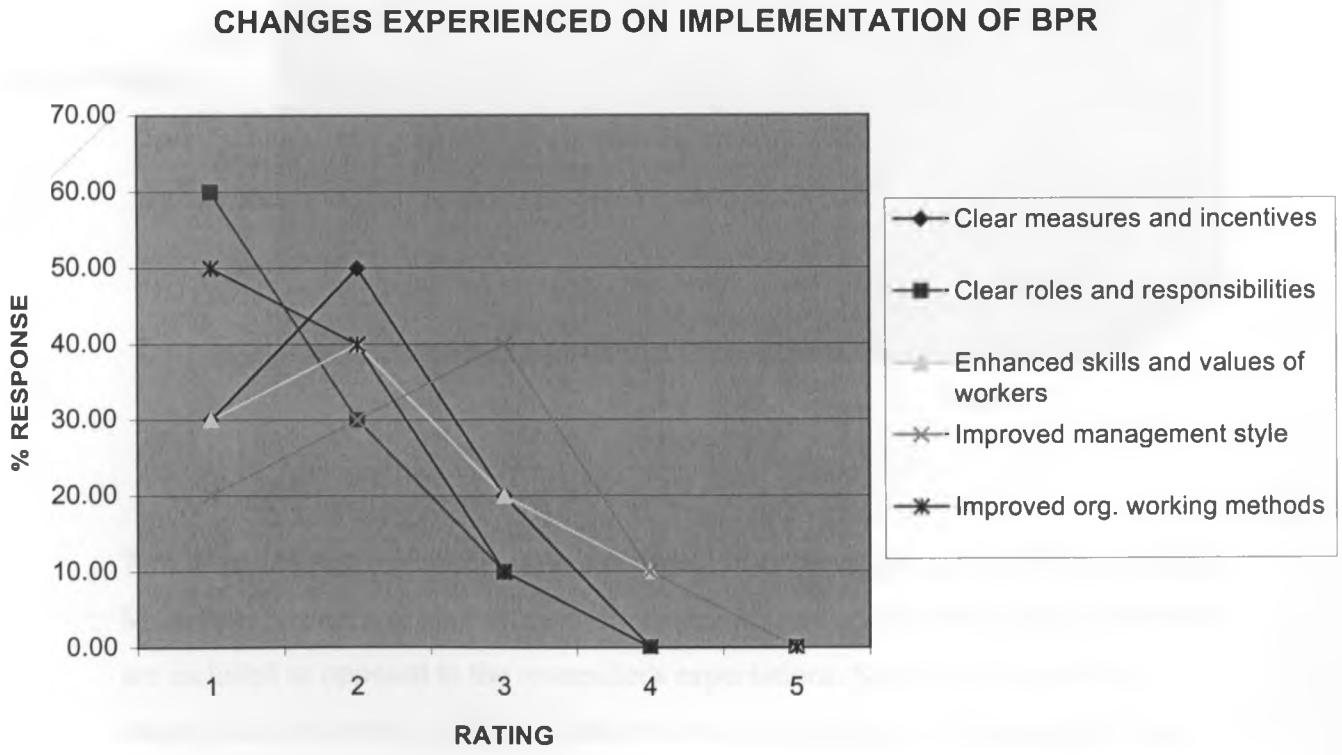
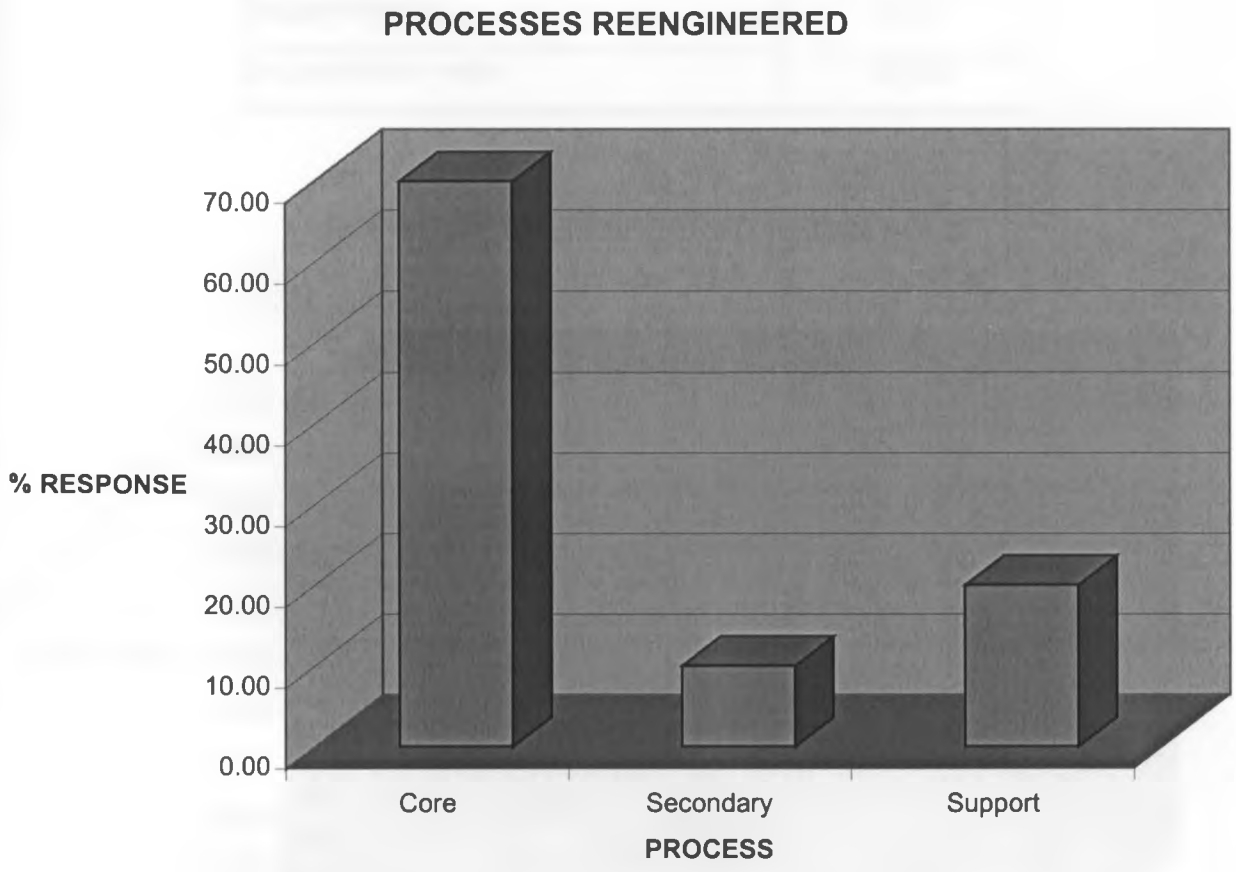


Table 4.5.3: Processes Reengineered

Processes Reengineered	% Response
Core	70.00
Secondary	10.00
Support	20.00
TOTAL	100



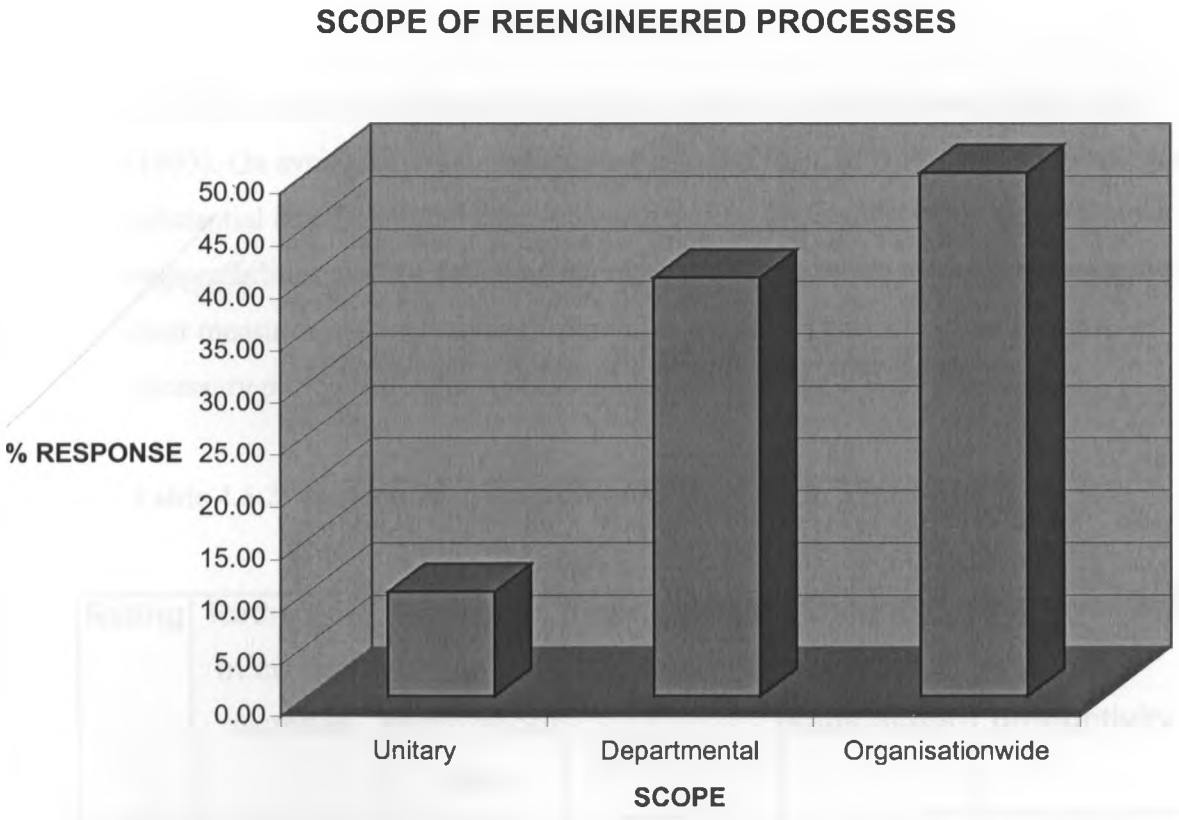
70% of Core / Primary processes are the focus of reengineering in the Pharmaceutical Manufacturing companies in Kenya. It is interesting to note that secondary processes are included as opposed to the researcher's expectations. Some companies were taking their first steps in BPR and hence started where there is minimal risk to the business i.e. support processes in which the customers are internal. This is similar to the finding in Finland.

4.6 SCOPE AND DEPTH

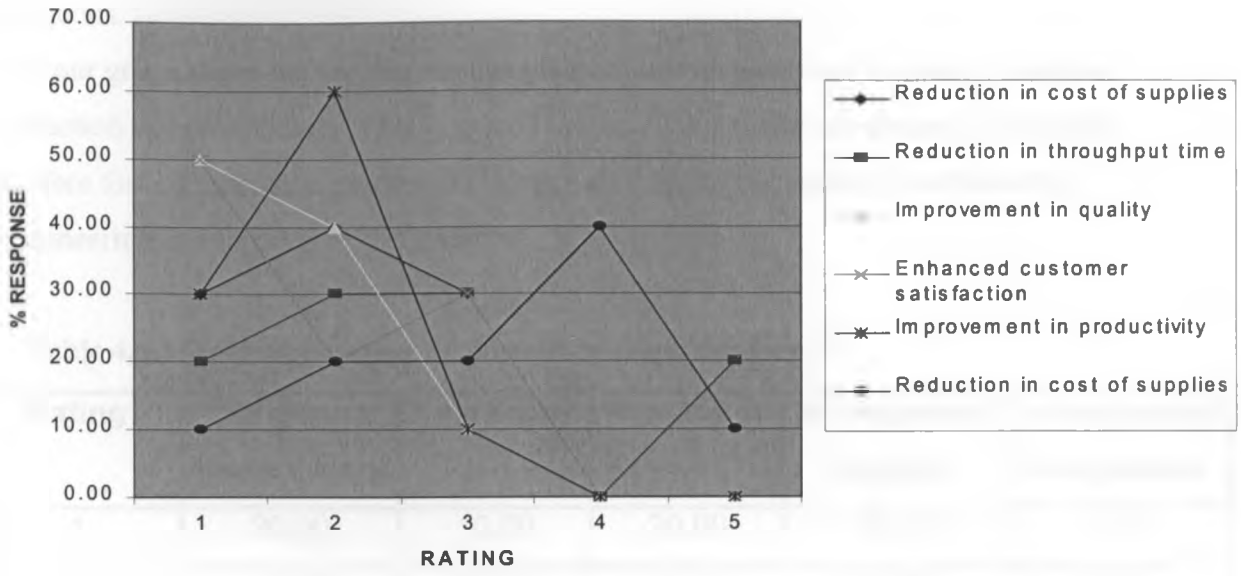
This focuses on the scope and depth of reengineered processes.

Table 4.6.1: Scope of Reengineered Processes

Scope of reengineered processes	% response
Unitary	10.00
Departmental	40.00
Organization-wide	50.00



Only 10% chose intra-functional processes involving a single organization unit. This is normally characterized as exploitation of capabilities. 40% were inter-functional i.e. departmental hence internal integration or regular business process redesign [Venkatraman, (1994)]. 50% were organization-wide however on further examination these were aimed at improving internal efficiency.



The depth of BPR initiatives was analyzed based on classification of Hall et.al. (1993). On average most companies indicate that their BPR Projects involved rather substantial changes as had been indicated earlier, the highest being clear roles and responsibilities at 60%, followed by improved organization working methods then clear measures and incentives (Refer to table 4.6.2). These are often seen a s necessary prerequisites for successfully accomplishing a BPR Project.

Table 4.6.2: Performance Improvements (1 = High, 5 = Low)

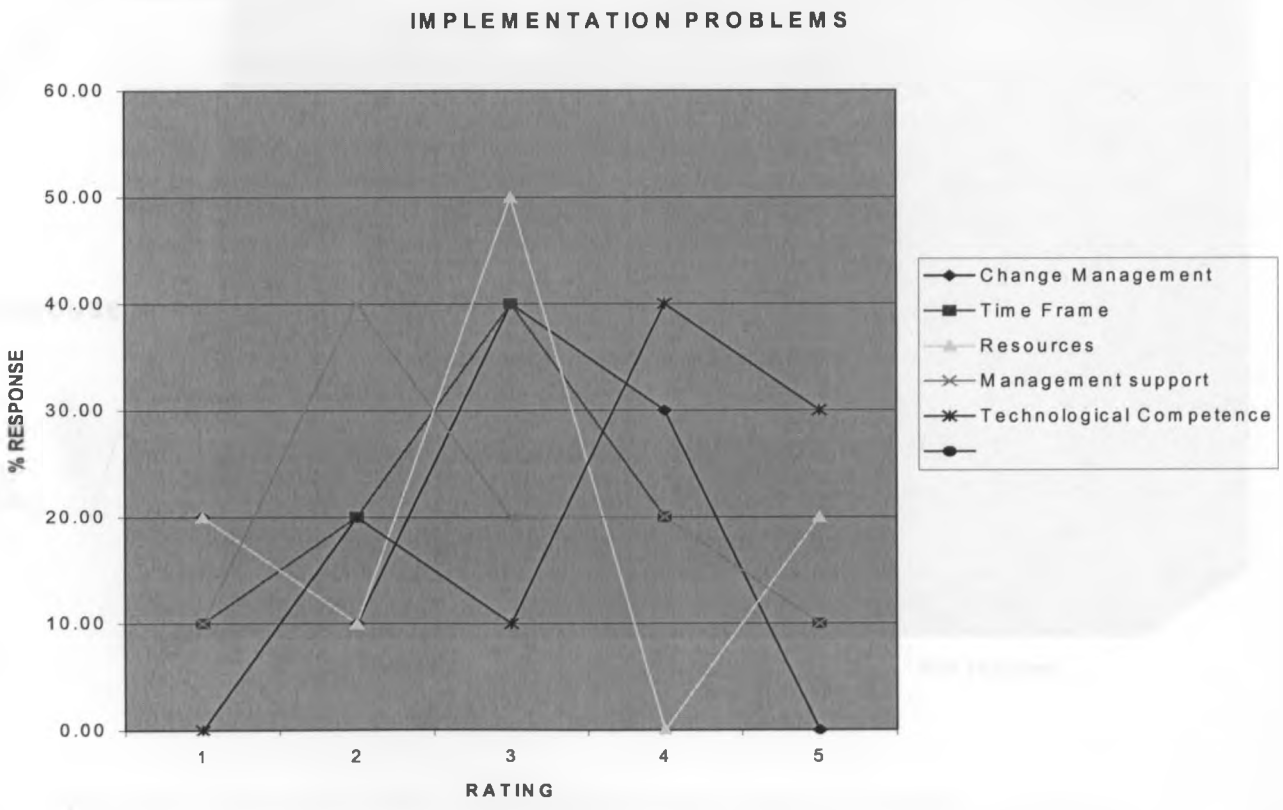
Rating	Reduction in cost of supplies	Reduction in throughput time	Improvement in quality	Enhanced customer satisfaction	Improvement in productivity	Reduction in cost of supplies
1	30.00	20.00	50.00	50.00	30.00	10.00
2	40.00	30.00	40.00	20.00	60.00	20.00
3	30.00	30.00	10.00	30.00	10.00	20.00
4	0.00	0.00	0.00	0.00	0.00	40.00
5	0.00	20.00	0.00	0.00	0.00	10.00

The temptation of reengineering is in the claim that significant improvements cannot be realized by incremental means. However the levels of incremental and dramatic are quite ambiguous.

From our graph above we see that the three major improvements are in quality, customer satisfaction and productivity. This is geared towards competitive advantage. This implies therefore that companies are aware of major goals that can be potentially achieved by reengineering as stipulated in the literature.

Table 4.6.3: Implementation Problems (1= High, 5 = Low)

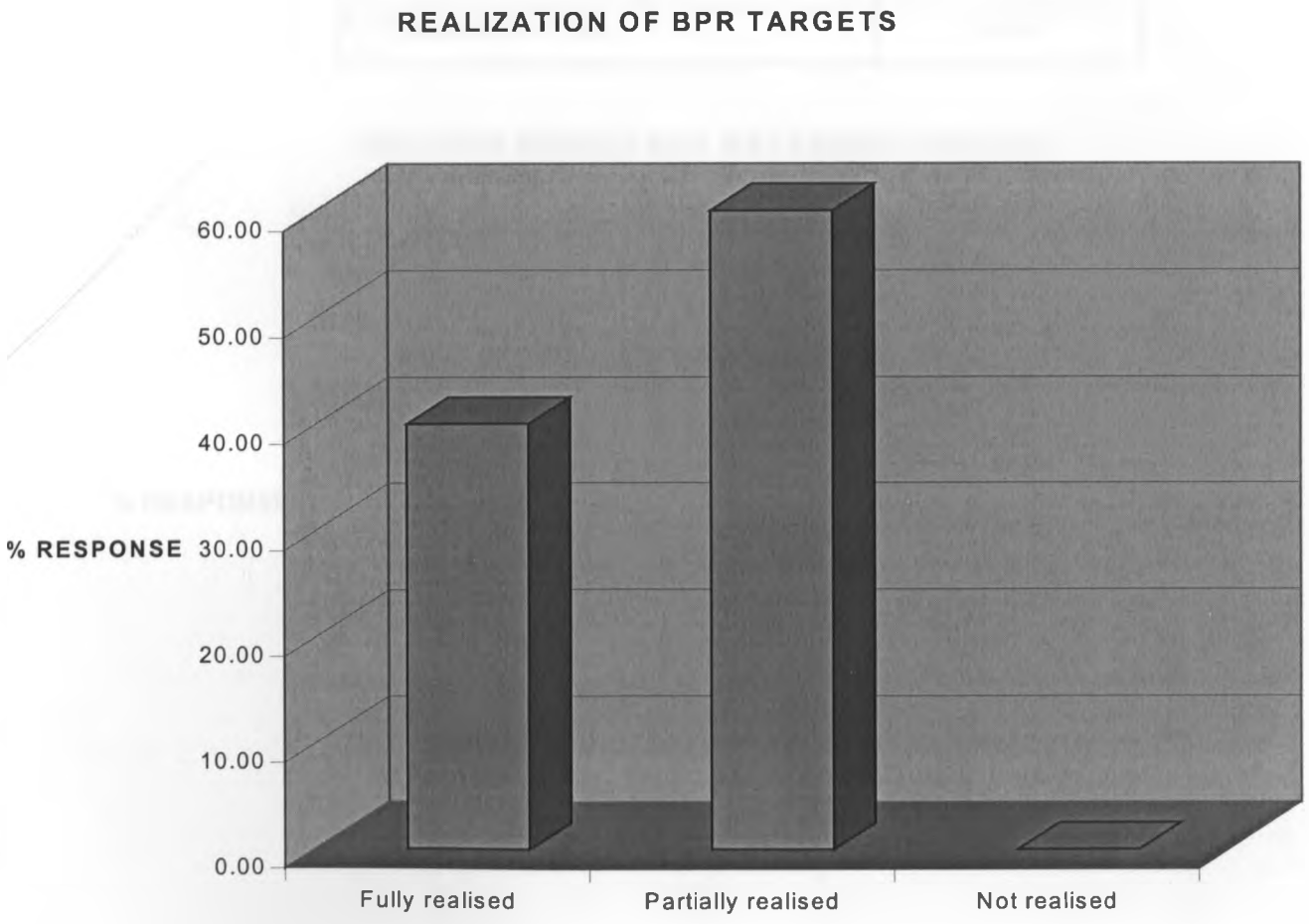
Rating	Change Management	Time Frame	Resources	Management support	Technological Competence
1	20.00	10.00	20.00	10.00	0.00
2	10.00	20.00	10.00	40.00	20.00
3	40.00	40.00	50.00	20.00	10.00
4	30.00	20.00	0.00	20.00	40.00
5	0.00	10.00	20.00	10.00	30.00



Resources, management support and time frame have been picked up as key implementation problems. The Kenyan Pharmaceutical Manufacturing firms realize that top management support and resources are necessary for successful implementation of BPR this also ties in well with company-wide understanding of what BPR entails.

Table 4.6.4: Target realization

Target	% Response
Fully realized	40.00
Partially realized	60.00
Not realized	0.00

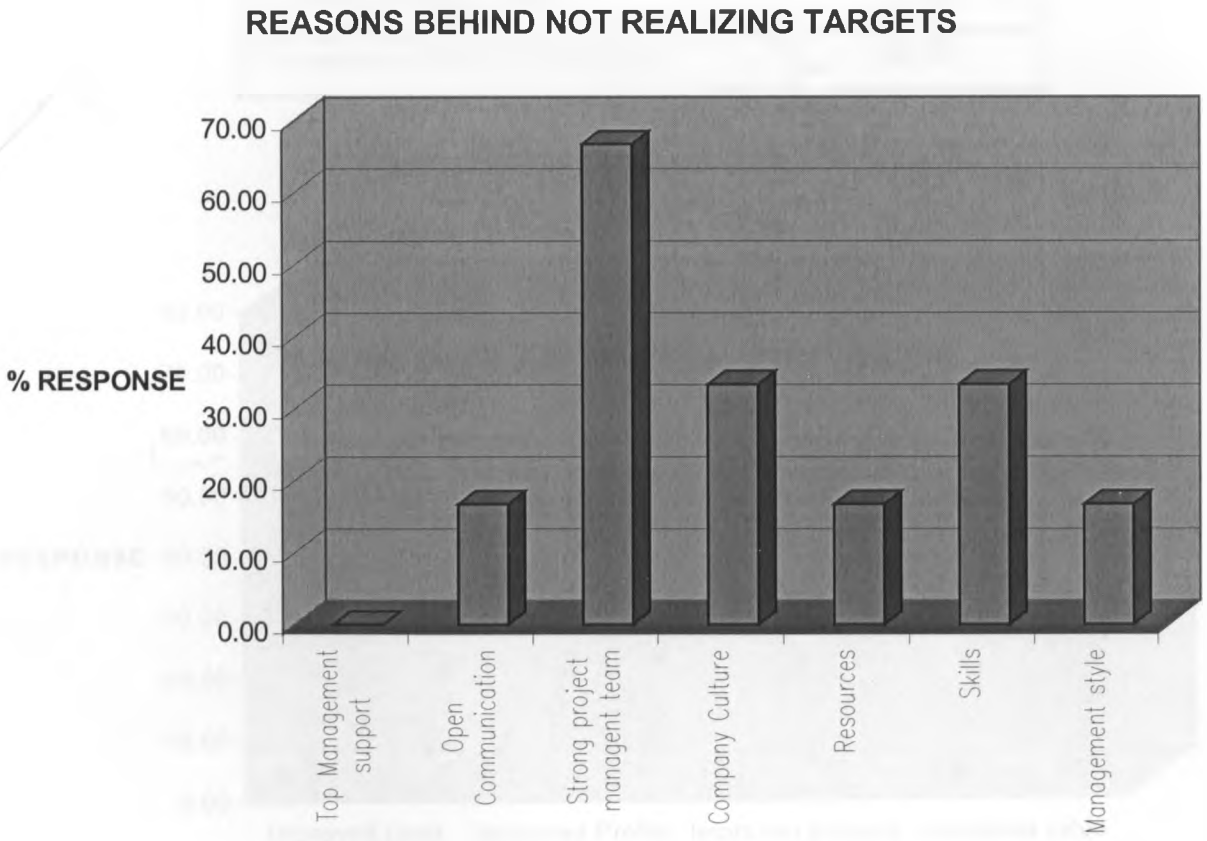


The above indicate that 40% of the companies that implemented BPR realized their targets whereas 60% partially realized their targets. Fortunately none of the

companies did not realize targets at all. This contradicts literature, which claims that BPR is mostly unsuccessful, however is inconsistent with conventional wisdom that most respondents did not fully realize their targets

Table 4.6.5: Reasons for not meeting Targets

Reasons for not meeting Targets	% Response
Top Management support	12.00
Open Communication	16.67
Strong project management team	66.67
Company Culture	46.33
Resources	16.67
Skills	33.33
Management style	16.67

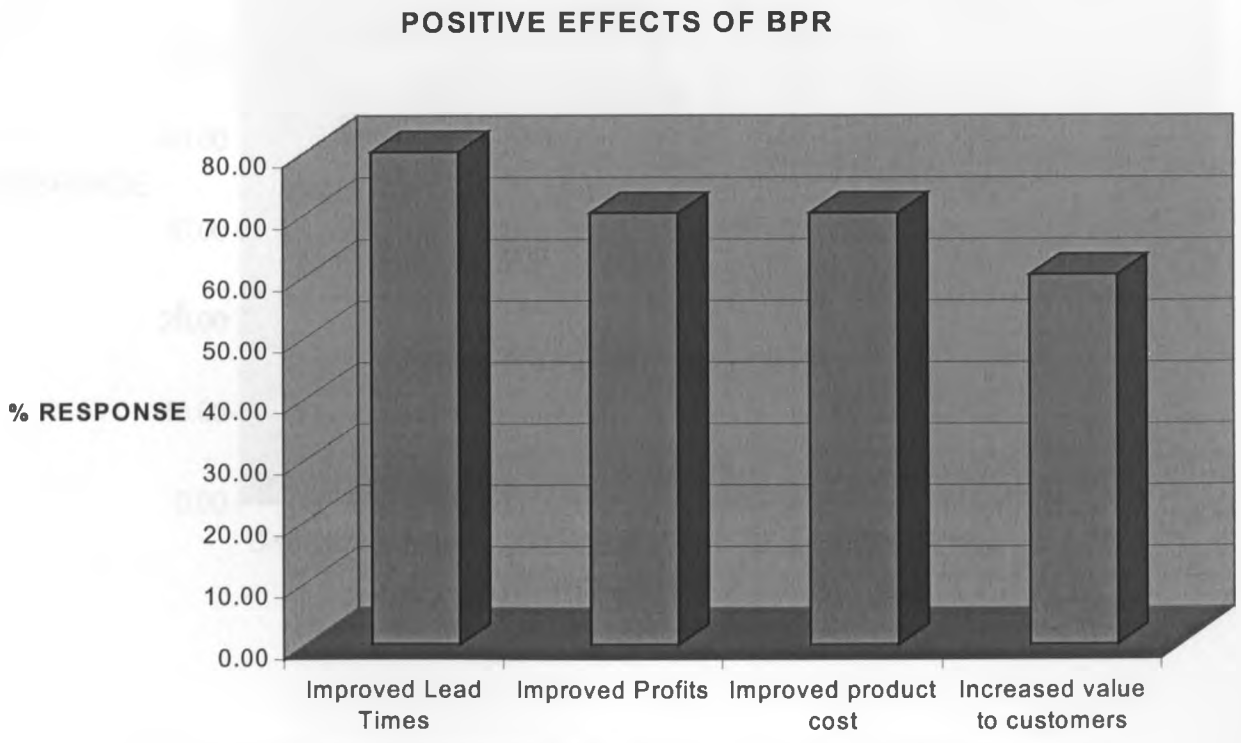


Reasons for not meeting targets was highly attributed lack of strong project management team and inability to overcome traditional processes as indicated by company culture. 67% attributed failures to lack o strong project management team while 46% indicated that company culture was the biggest obstacle. This is consistent with BPR literature, which claims that for BPR to be successful, old ways of working must be completely abandoned. Top management support has also been sited. The responses add to more than 100% as respondents were at liberty to select as many causes as possible.

Skills, resources and open communication leads more to management style.

Table 4.6.6: Positive aspects of BPR

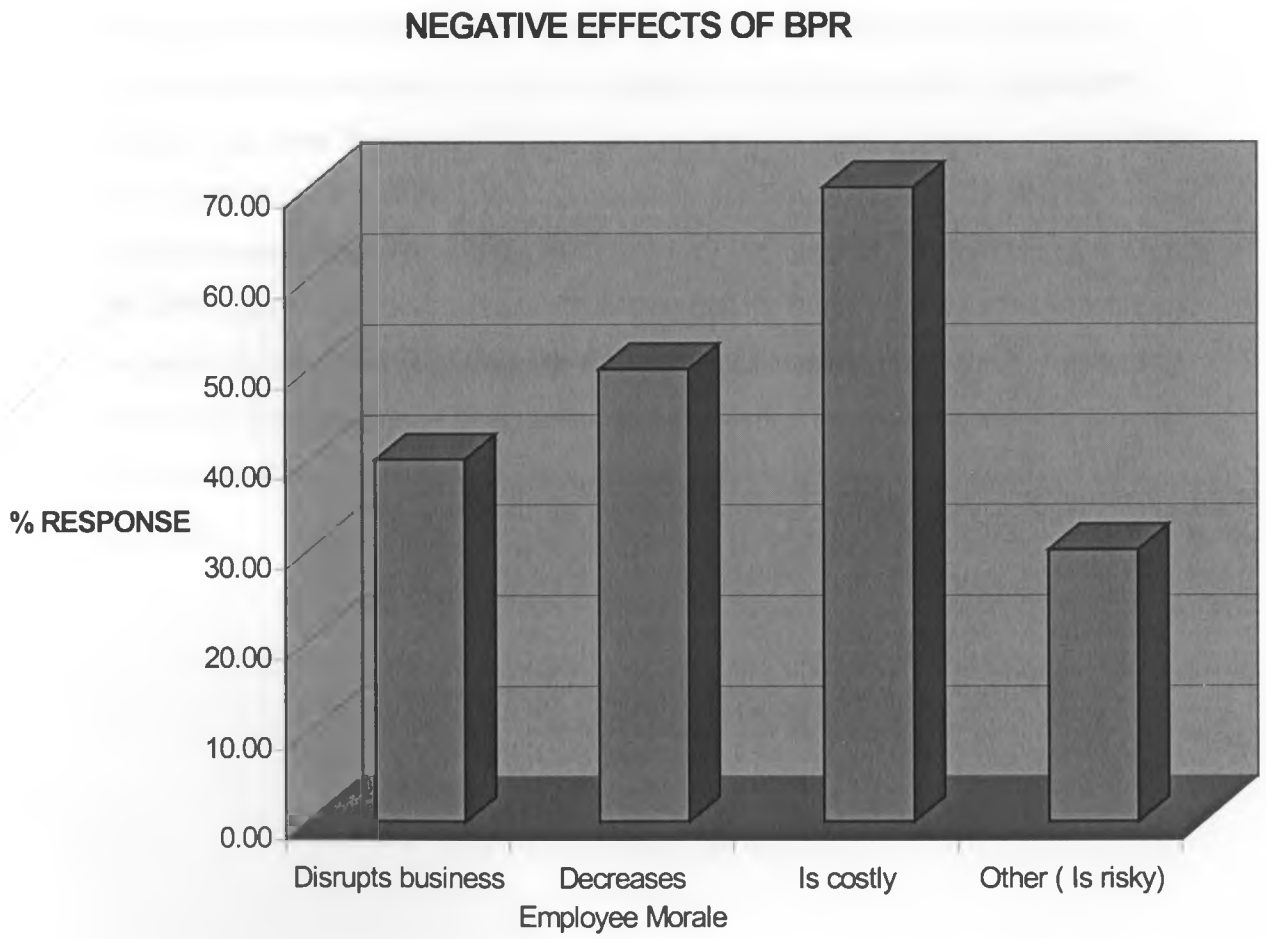
Positive effects of BPR	% Response
Improved Lead Times	80.00
Improved Profits	70.00
Improved product cost	70.00
Increased value to customers	60.00



Apparently many firms seem to recognize the positive aspects of reengineering as shown above. However the researcher did not go into details to determine whether these were actually realized and hence room for further research.

Table 4.6.7: Negative aspects of BPR

Negative effects of BPR	% Response
Disrupts business	40.00
Decreases Employee Morale	50.00
Is costly	70.00
Other (Is risky)	30.00



According to the Kenyan Pharmaceutical Manufacturing firms, 40% of those who have implement BPR believe that it disrupts business while 505 believe it decreases

employee morale. 70%v believes it is costly while 30% believe it is risky. This is probably due to the fact that BPR is in its development stages in Kenya

4.7 ORGANISATIONS THAT HAVE NOT HEARD OR IMPLEMENTED BPR

Most of these companies are relatively smaller in size compared to those who have implemented BPR. 8 companies in total have not implemented BPR. These smaller companies may be less reluctant to embark on reengineering projects due to its high risk, cost and complexity. Although not all the organizations that had heard of BPR considered implementing it. The most significant reasons for not implementing BPR was insufficient knowledge on the subject. This therefore implies that the Kenyan Pharmaceutical industry realizes that for BOR to work there must be top level commitment and support as well as a company-wide understanding of what BPR entails. The other factors highlighted were no need for drastic change, other priorities existing within the company and inadequate project management. Apparently all these reasons have to do with the inadequacy of the company and not negative aspects of BPR. This could also be due to the reason that the companies do not know the negative aspects of BPR or they know but are not concerned with them. Apparently Ernst and Young survey, (1995) found that the second explanation was true amongst US organization. However in Kenya, lack of knowledge negative aspects of BPR prevails.

CHAPTER 5

5.1 SUMMARY AND CONCLUSION

5.2 SUMMARY

The two main findings of this study are that the BPR projects among the studied companies have been successful. The companies mainly focussed on narrowly defined process changes they were relatively easy to manage and hence no radical BPR projects were found. This is difficult to explain as there could be several factors behind this some of these being…

1. No radical initiatives among the studied companies, however there were a number of companies that had significant reorganizations due to mergers and acquisitions.

2. The surveyed companies had projects, which were carried out as development projects on the contrary to significant changes based on time analysis and decision of the principles for change.

3. Most companies were in good financial shape and hence not forced into any all-or-nothing, high-risk endeavours.

From the results tabled through chapter three the researcher can therefore state the drivers and tracers of BPR in the Pharmaceutical Manufacturing Industry in Kenya are similar to those indicated by Jukka et.al (1995) as follows...

5.2.1 Drivers of BPR

The drivers of BPR can be classified as follows…

1. Internal efficiency of the company's operations e.g. high cost or low quality

2. Changed customer, observed as low satisfaction levels

3. Uncontrollable environmental changes which are unpredictable to the industry e.g. new legislation. Apparently new technology doesn't seem to affect the Kenya environment so far as we adopt what has already been tried elsewhere.

5.2.2 Possible tracers

The possible tracers can be classified as follows…

1. Business process reengineering, when a single entity redesigns its operations by automating or obliterating tasks within its core processes. This seems to have been carried out to a larger extent within this survey

2. Business process restructuring, through differentiation of process portfolio for providing variants of the same basic products / services

3. Business reengineering as proposed by Edwards and Peppard (1994), when companies in the same industry adopt new business operations strategies in order to produce new products / services through different channels to chosen customer / supplier segments

   It is wise to note that efficient implementation of different types of reengineering efforts is problematic and hence one needs to map the drivers of change and methods for implementing them.

5.3 CONCLUSION

BPR is a management tool that has received a lot of attention in the literature in recent years. It has been subject to both cynicism and optimism. Some critics say that BPR is full of myths that cannot be practically implemented. Advocates of BPR on the other hand not only claim that BPR works but that it is essential to a company's survival. The survey conducted by the researcher yielded a 90% response rate evolving the following key findings…

1. 44% of the Kenyan Pharmaceutical Manufacturing firms have not heard about BPR

2. The use of BPR in Kenya lags behind that if Finland, USA and Europe

3. Despite the failure rate of BPR reported in the literature, 56% of the Kenyan Pharmaceutical manufacturing firms are successful at implementing BPR

4. Top management support is the most important factor to the success of a reengineering project

5. The inability to abandon the traditional ways in which work is done in an organization (Company culture) is the most significant reason for failure of BPR in Kenyan Pharmaceutical manufacturing firms.

6. The main drivers of reengineering efforts are competitive advantage, decreased operating costs.

7. Insufficient knowledge and no support from management are the main reasons for not implementing BPR.

5.4 LIMITATIONS OF THE STUDY AND AREAS OF FUTURE RESEARCH

The study was conducted in one section of manufacturing Industry in Kenya. Therefore the results reflect the perceptions of individuals within this industry and hence results are not generalizable. More studies with a larger sample size are thus needed. The response rate of the survey was about 90%, which was quite impressive.

Some of the questionnaire were filed by CEO's of the organizations, yet they were targeted at operations managers and hence content could change if the individuals targeted would have filed the questionnaire exclusively.

It appears that reengineering is still in its infant stage in Kenya. As popularity and use grow so will the experiences of organizations, researchers and consultants. Therefore the results of this survey may change as BPR matures.

The study determined the kind of negative effects Kenyan Pharmaceutical Manufacturing firms were experiencing with respect to BPR. However more research is required to establish why the companies are experiencing these negative effects? Are companies predicting these negative effects and if so how are organizations trying to overcome them? These questions can be answered by examining organizations more closely to determine what those companies that succeed at BPR are doing differently than those that do not realize their targets fully.

Last but not least, the role that downsizing plays in BPR is a concern as employee morale is affected due to this. Critics of BPR claim that it leads to downsizing and this is evident in the Kenyan Pharmaceutical Manufacturing firms which still affects the business. More research is needed in this area in form of cases or other such studies to determine whether this is indeed a true phenomenon. If it is, companies can be warned not to reduce staff drastically as a result of BPR efforts.

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APPENDIX 1

LETTER OF INTRODUCTION

The Respondent,

.....

P.O. Box.....

NAIROBI

Dear Sir / Madam

RE: REQUEST FOR YOUR PARTICIPATION IN MY RESEARCH WORK

I am a postgraduate student in the Faculty of Commerce, University of Nairobi, Pursuing a Masters in Business Administration (MBA) degree programme.

In order to fulfil the degree requirements, I am undertaking a management research project on Business Process Reengineering as conceived and applied by the Pharmaceutical Manufacturing companies in Kenya.

The study is purely for academic purposes. All information given shall be kept strictly confidential. The study may bring out some suggestions, which could be useful for the industry. A copy of the final study may be availed to you on request once the study is complete.

Your organization being one of the leading and well managed Pharmaceutical manufacturing companies in Kenya has been selected for this study and I would highly appreciate if you would spare some time to kindly complete the attached questionnaire for me.

Thank you for your valuable co-operation.

Yours Faithfully,

Susannah R. Munyiri

Supervisor's Signature: _____

J.K. Kipng'etich

QUESTIONAIRE

Please spare a little of your time to fill in this questionnaire. Try as much as possible to follow the instructions and answer all the questions you are required to fill. It will be of value to the Pharmaceutical Industry.

Note: Tick or fill as appropriate

SECTION 1: COMPANY DATA

1. Which year was your organization established? _____

2. How many employees does your organization have?
   (a) Less than 100 [ ]
   (b) Between 100 and 200 [ ]
   (c) Between 200 and 300 [ ]
   (d) Above 300 [ ]

3. How would you classify the ownership of your organization?
   (a) 100% foreign owned [ ]
   (b) 100% locally owned [ ]
   (c) Over 51% foreign owned [ ]
   (d) Over 51% locally owned [ ]

4. What is the annual turnover of your organization?
   (a) Over Ksh. 400,000,000 [ ]
   (b) Ksh. 50,000,000 to 400,000,000 [ ]
   (c) Below Ksh. 50,000,000 [ ]

5. Does your organization have a mission statement?
   (a) Yes [ ]
   (b) No [ ]
   If yes please state mission:

   _____

   _____

6. Does your organization have a strategic plan?

(a) Yes [ ]

(b) No [ ]

7. What profession is the CEO of your organization : _____

SECTION 2: PRELIMINARY INFORMATION

In considering changes that have taken place in your organization how can you describe the following…

(i) Level of change

(a) Incremental [ ]

(b) Radical [ ]

(ii) Starting point for the change

(a) Existing process [ ]

(b) Clean slate [ ]

(iii) Frequency of change

(a) Incremental [ ]

(b) Dramatic [ ]

(iv) Time required for the change

(a) Short [ ]

(b) Long [ ]

(v) Level of participation in the change

(a) Bottom-up [ ]

(b) Top-bottom [ ]

(vi) Typical scope for the change

(a) Narrow, within functions [ ]

(b) Broad, cross-functional [ ]

(vii) Risks involved in the change

(a) Moderate [ ]

(b) High [ ]

SECTION 3: ORGANISATIONAL CHANGES

8. When streamlining operations how do you rate the below considerations?

(Please note 1 = Very Important while 5 = not important)

Consideration	**1**	**2**	**3**	**4**	**5**
Quality					
Cost					
Service					
Speed					
Other (Please specify)					

9. To what extent do you involve the below mentioned stakeholders when streamlining operations?

(Please note 1 = Very high involvement while 5 = no involvement at all)

Stakeholder	**1**	**2**	**3**	**4**	**5**
Employees					
Customers					
Suppliers					
Shareholders					
Government					
Other (Please specify)					

10. What is your company's position in the use of Business Process Reengineering (BPR)? (Note this includes restructuring and changes that necessitate complete change of a process / processes)

(a) Already have BPR initiatives [ ]

(b) Are planning to start BPR initiatives [ ]

(c) Have neither initiatives nor plans to start one [ ]

11. Is your company involved in any other process improvement initiatives?

(a) Yes [ ]

(b) No [ ]

If yes please state the initiatives: _____

12. What are / were the reasons for starting the BPR projects?

	Yes	*No*
(a) Changes in business or competitive environment	[ ]	[ ]
(b) Active pursuit of strategic benefits	[ ]	[ ]
(c) Problem recognized in business process	[ ]	[ ]
(d) Opportunities offered by new technologies	[ ]	[ ]
(e) Financial condition of the company	[ ]	[ ]
(f) Trying out reengineering	[ ]	[ ]
(g) Other	[ ] please specify	_____

_____

13. To what extent are the following performance improvements realized from the BPR projects implemented?

(Please note 1 = Very high while 5 = No improvement)

Performance Improvement	**1**	**2**	**3**	**4**	**5**
Reduction in cost within the company					
Reduction in throughput time					
Improvement in quality					
Customer satisfaction					
Employee productivity					
Reduction in cost of supplies					
Other (Please specify)					

14. What type of processes has the company focussed on in reengineering?

(a) Core [ ]

(b) Secondary [ ]

(c) Support [ ]

15. How did the company select the processes to be reengineered?

(a) Those already in Trouble [ ]

(b) Trouble seen coming [ ]

(c) Ambitious and aggressive [ ]

(d) Other [ ] please specify _____

_____

16. What has been the scope of the reengineered processes?

(a) Unitary process [ ]

(b) Departmental process [ ]

(c) Organization-wide process [ ]

17. What were/are the substantial changes experienced on implementation of Business Process Reengineering (BPR) projects?

(Please note 1 = Highly substantial change while 5 = No change)

Performance Improvement	**1**	**2**	**3**	**4**	**5**
Clear measures and incentives					
Clear roles and responsibilities					
Enhanced skills and values of workers					
Improved management style					
Improved organisation working methods					
Other (Please specify)					

18. To what extent were the following risks or implementation problems experienced

(Please note 1 = High while 5 = Low)

Performance Improvement	1	2	3	4	5
Change Management					
Time frame					
Resources					
Management support					
Technological competence					
Other (Please specify)					

19. Were your targets for BPR realized?

(a) Yes [ ]

(b) No [ ]

20. What were the reasons for not meeting BPR targets?

	Yes	No
(a) Top Management support	[ ]	[ ]
(b) Open communication	[ ]	[ ]
(c) Strong project management team	[ ]	[ ]
(d) Company culture	[ ]	[ ]
(e) Resources	[ ]	[ ]
(f) Skills	[ ]	[ ]
(g) Management style	[ ]	[ ]
(h) Other	[ ] please specify_____	

21. What are the positive effects of BPR

	Yes	No
(a) Improved lead times	[ ]	[ ]
(b) Increased profits	[ ]	[ ]
(c) Improved product costs	[ ]	[ ]
(d) Increased value to customers	[ ]	[ ]
(e) Other	[ ] please specify _____	

22. What are the negative effects of BPR

	Yes	No
(a) Disrupts business	[ ]	[ ]
(b) Decreases employee morale	[ ]	[ ]
(c) Is costly	[ ]	[ ]
(d) Other	[ ] please specify	_____

23. Is BPR necessary for a company's survival in the future

(a) Yes [ ]

(b) No [ ]

(c) Do not know [ ]

24. What do you think about BPR

_____

_____

_____

Thank you for taking your time to fill in this questionnaire