DECLARATION

This project is my original work and has not been presented for a degree in any other University.

Fred Kariuki

FREDRICK KARIUKI NGURE

This project has been submitted for examination with my approval as University Supervisor.

JOHN KENDUIWO

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This research paper is the culmination of two years of study under very challenging conditions as a part-time student. I would like to acknowledge the support of the entire MBA teaching staff at the University of Nairobi for their support and guidance. The support of my employer, Firestone E.A. Ltd, is also highly appreciated. Last, and certainly not the least, I wish to acknowledge God's providence in the entire program.

ABSTRACT

The period 1995-2000 has witnessed major changes in the manufacturing sector in Kenya. From a predominantly protected business environment in the 70s & 80s, economic liberalization policies have exposed many firms to competition from cheap but relatively superior imports.

Consultants in Kenya have been involved in assisting the industry in survival strategy formulation and implementation. However, this expert involvement has mainly been focused on the firm's goal or mission, i.e. market share retention and expansion, or profit maximization within the context of the industry's environment and the firm's capability. There has been little involvement of consultants in the improvement of the company's internal value adding processes with a view to revitalizing the internal operations and nurture their ability to deliver outstanding products and services at competitive prices. This is in spite of documented cases of successful collaboration between industry and consultants in the relatively more competitive business environments in Europe and America.

It is against this background that this research was set up to explore Kenya's manufacturing sectors' perception of a process improvement consultant. The research variables under investigation were:- the general perception of a process improvement consultant; areas in the manufacturing sector that would attract the services of such a consultant; and, performance indicators that would be appropriate for such a consultant's intervention.

The research design was in the form of a survey of 100 manufacturing companies in Nairobi. The data was collected using self administered questionnaires using the drop and pick method. A total of 62 companies responded.

The research findings on the perception of a process improvement consultant were that such a person would be required at this point in time and there is no fear that he or she would make himself indispensable nor be an indication of the company's failure to handle its own problems. There were fears though, that a consultant with the expertise to deal with a variety of unique manufacturing processes would be difficult to come by and if available , might be too expensive.

The findings on the possible areas for assignment are that equipment productivity improvement engagements are more preferred to management aspects such as scheduling and supervision. On the preferred performance indicators, the results indicate a general inclination towards lagging indicators such as annual profits rather than leading indicators such as staff turn over or lead time minimization.

The general conclusion from this study is that the manufacturing sector in Kenya perceives a process improvement consultant positively and would welcome his or her assistance on a mutually beneficial relationship. It is hoped that these findings will assist consultants in designing effective programs and practices for the manufacturing sector in Kenya.

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CHAPTER ONE

INTRODUCTION

1.1 BACKGROUND

The period 1995-2000 has witnessed a dramatic shift in paradigms in the manufacturing sector in Kenya. From a predominantly protected business environment in the 80s , the government, on recommendations by international financiers such as the World Bank and International Monetary Fund (IMF), has since liberalised major aspects of the economy heralding changes in foreign exchange regulations, import and export practices; and even equity distribution. The free market economy created has exposed local manufacturing firms to an unpredictable business environment resulting in numerous corporate reorganizations with a view to implementing appropriate survival strategies.

Strategic planning, formally or informally, has since been more pronounced as companies seek ways of remaining competitive in the emerging turbulent business environment. Expert assistance from Consultants has been sought, mostly in the form of Strategic Planning Seminars. The general strategy formulation process adopted by most firms has been to work within the goals or mission of the firm -*market share retention or expansion, profit maximization, social responsibility, etc* - and incorporate the environment – *the industry and its threats and opportunities and anticipated changes*; with the Company – *its strengths and weaknesses as unfolded from its historical path*; into an agreeable strategy[1].

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[1]Gluck, F.W. , *Changes in Strategy or Competition Also Map the Consulting Practice of Firms*, Havard Business Review, November-December 1980, p. 132

The strategy would include, among others, choices of product/market domain, competitive advantage, synergy, growth direction, and vertical integration alternatives. Aspects of strategy implementation such as management of strategic change, organization restructuring, information systems, and provision of strategic controls have also been given prominence.

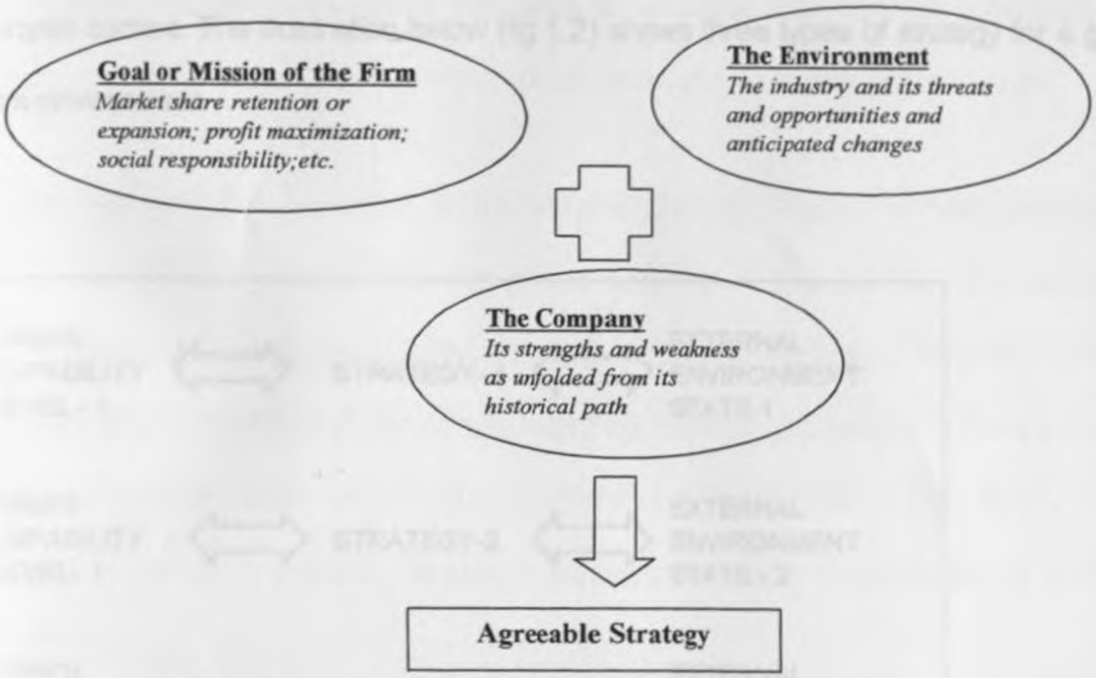

Fig. 1:1 – Strategy Formulation Process (Gluck, 1980)

1.2 INDICATION OF NEED

A critical review of survival strategies adopted by most manufacturing firms in Kenya indicates that these have been geared towards containing a hostile business environment while doing little to build the requisite firms' internal capability to withstand changes in the

external environment. Thus, the main pre-occupation of the Manufacturing sector's umbrella organization, the Kenya Association of Manufacturers (KAM) has been to lobby for improvement in macro-economic aspects such as lower duties for imported raw materials, better infrastructure and lower cost of capital.

The concept of *strategic fit* as put forward by **Ansoff** [2] seems not to be effectively applied in the Kenyan context. The illustration below (fig 1.2) shows three types of strategy for a given external environment

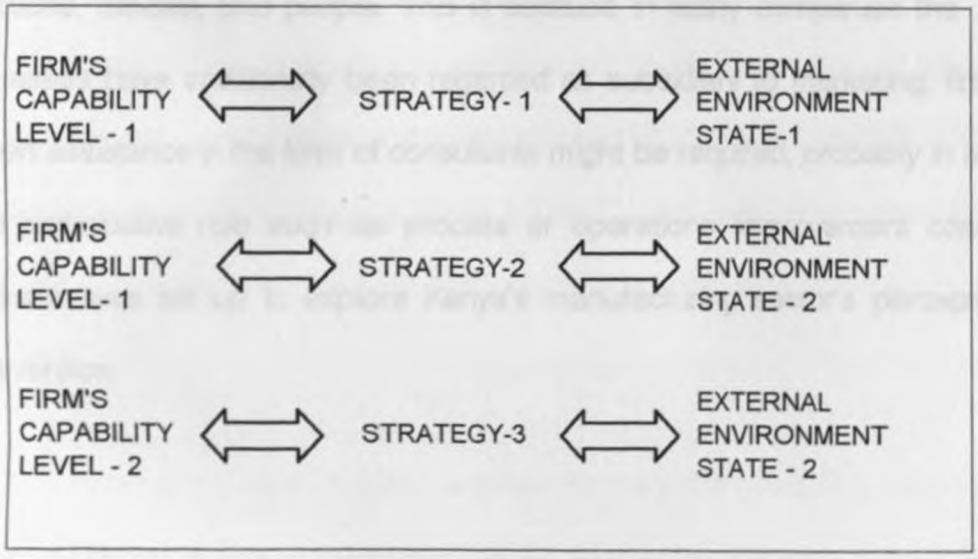

Fig 1.2 – Various Forms of Strategic Fit

[2] Ansoff, H.I. ; *Corporate Strategy;* MacGraw – Hill, New York (1980) pp. 255-256

From a pre-study investigation conducted, results indicated that majority of firms in Kenya go for a strategic fit type 2, i.e one that remedies the impact of changes in the external environment without significantly altering the firm's internal capability. Yet, according to the concept of **operations strategy**[3] a more effective strategic fit type 3 can be realized by combining strategic planning with operations management. Thus, firms which have tended to think of strategic role primarily in terms of selecting which industries or markets to enter should refocus their attention inward and seek to revitalize their internal operations and nurture their ability to deliver outstanding products and services at competitive prices.

Achieving this kind of revitalization is difficult, and perhaps requires a major overhaul in practices, mindset, and people. This is because in many companies the manufacturing processes have traditionally been regarded as subsidiary to marketing, finance, or R&D. Expert assistance in the form of consultants might be required, probably in a more practical and participative role such as process or operations improvement consultancy. This research was set up to explore Kenya's manufacturing sector's perception of such an intervention.

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[3]Hayes, H.,Pisano, G.P. & Upton,D.M.; *Strategic Operations – Competing Through Capabilities;* Simon & Schuster Inc. (1996); p.3

1.3 THE RESEARCH PROBLEM

The concept of strategic planning, formally or informally has taken root in the manufacturing sector Kenya, thanks to economic liberalization. However, proliferation of relatively cheap and high quality imported goods has presented a new challenge to the firms. Manufacturing companies need to improve their conversion operations so as to build the requisite internal capability to make their products competitive in the open markets.

According to **Meyers & Skiling**[4], consultants in United States of America (USA) and Europe have been of great assistance to the managers of firms seeking to improve their processes so as to fit an intended strategy. A combined effort between a company's productivity improvement teams and consultants can lead to accelerated gains which can sustain the firm's competitiveness in a turbulent environment. **Kraft Foods Inc. of USA**, faced with stiff competition, set out an operations strategy aimed at shortening product delivery times while increasing the variety. An "Agility Thinking Team", composed of consultants and employees was set up to accomplish the task and yielded an overall 30% increase in profitability within one year[5].

A comparison of the state of affairs between Kenya's manufacturing industry and that in the USA or Europe shows a "grey area" as far as the involvement of consultants in process improvement is concerned.

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[4]Myers, A. & Skiling, D. ; *Management Consulting: A Framework for Best Thinking and Practice;* Cranefield School of Management, (1982); p. 176

[5]Goldman, S.L.; *Agile Manufacturing: A new production paradigm for society;* Iococca Institute, Lehigh University; (1994); pp. 212-223

	ASPECT	KENYA	USA/Europe
1.	Presence of Competition (open market system) ?	Yes	Yes
	Source(s)	*Various*	*Various*
2.	Consultants' involvement in Strategic Planning ?	Yes	Yes
	Source(s)	*Aosa,*	*Pearce & Robinson;*
3.	Consultant's involvement in Process Improvement ?	No	Yes
	Source(s)	*Kasekende, Odette* *Pre-Study Findings*	*Myers & Skiling;.* *Hayes, Pisano & Upton;* *Goldman, S.L.;*

Fig 1.3 – Statement of the Research Problem

As indicated on figure 1.3, little or no documented evidence exits to show the extent of involvement of consultants in process improvement. **Kasekende[6],** in a study of management consultancy as a strategy for transferring Western Management Technology in Kenyan Organizations indicated that the use of consultants in process improvement is low. However, given the current competitive business environment in Kenya, perhaps the need for consultants input in areas traditionally considered too closed for an outsider's involvement might be emerging or is actually there. This research was thus set up to explore the manufacturing sector's perception of process improvement consulting as a competitive strategy.

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[6]Kasekende, C.S., *A study of manangement consultancy as a strategy for transferring Western Technology to Kenyan Organizations;* MBA thesis, University of Nairobi (1984), pp. 40-45

1.4 RESEARCH OBJECTIVES

The period 1995 - 2000 has been characterized by poor business performance by manufacturing firms in Kenya , mainly due to stiff competition from relatively cheap and high quality imports. Several companies have sought expert advise from consultants on what survival strategies to adopt. A review of this expert assistance indicates that most of it focused on the company's external environment, i.e. choice of products or markets to dominate, or vertical integration options. Internal process improvement to build the requisite capability to cope with the changes in the business environment was more or less left solely to the individual organization. However, from available literature, consultants in USA and Europe have been of great assistance to firms seeking to improve their operations. Moreover, **Hayes and Upton**[7] state that an organization can strengthen its competitive advantage by not only identifying and expanding into apparently attractive markets, but also on improving the internal capabilities to enable it create and deliver competitive products or services.

Given this background, this research's objectives were to identify :-

(a) Dominant consultant services in the manufacturing sector in Kenya.
(b) Perception of a process improvement consultant in the manufacturing sector.
(c) Areas in the manufacturing processes that would attract the services of a process improvement consultant.
(d) Performance indicators that would be appropriate for a process consultant's involvement.

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[7] Hayes H,; Pisano G.P.;& Upton, D.M. ; *Op. Cit.* p 7

1.5 IMPORTANCE OF THE RESEARCH

In more advanced economies such as in USA and Europe, the use of consultants in various specializations is widespread. Increased competition coupled with a rapidly changing business environment has resulted in the growth of demand for experts in various corporate management aspects. Consultants in Kenya have been involved in strategy formulation processes for various manufacturing firms in the last ten years.[8] Although this collaboration between industry and consultants has yielded some results, continued proliferation of relatively cheap and high quality imported goods in the midst of a deteriorating business environment - high interest rates, poor infrastructure,- has necessitated a rethinking of the strategy formulation process.

The concept of Operations Strategy as proposed by **Hayes and Wheelwright**[9] and successfully implemented in USA and Europe can help improve local manufacturing company's competitiveness.

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[8]Aosa, E.; *An Empirical Investigation of Aspects of Strategy Formulation within Large, Private Manufacturing Companies in Kenya;*Phd Dissertation; University of Strathclyde, (1992); p. 191

[9]Hayes, R & Wheelwright, S.; *Restoring Our Competitive Edge: Competing Through Manufacturing*; New York, (1984) pp.12 –34

By seeking to identify the industry's perception of process improvement consultants; areas that would attract consultants' intervention, and appropriate performance improvement indicators, this study will,

(a) Assist consultants in designing effective programs and practices for the manufacturing sector.

(b) Help industry stakeholders such as the Government of Kenya and the Kenya Association of Manufactures formulate policies that would provide access to expert advise on process improvement for the manufacturing sector.

(c) Provide pertinent information to other publics such as suppliers, financiers, shareholders and researchers on the manufacturing sector's perception of process consultancy as a growth or competitive strategy.

CHAPTER TWO

LITERATURE REVIEW

2.1 OPERATIONS STRATEGY

The concept of Operations Strategy, a combination of operations management and strategic planning , is relatively new and has its roots in the dramatic changes in the world's competitive environment and in the nature of industrial competition that have occurred over the past decade.

The swelling number of global competitors and new entrants has caused competition to become increasingly ferocious, and technological change is inundating even the most innovative companies. Consultants and academics have been re-examining the basis upon which successful firms have been able to build and sustain their competitive advantage. Such advantage, they have discovered, rests less on a firm's ability to identify and defend an apparently attractive market position than on the cultivation of organizational capabilities that enable it to create and deliver a product or service that is regarded as exceptional - even unique - by its customers.

The modern paradigm for competitive strategy is based on the notion of strategic fit, and evolved out of the famous "corporate strengths & weakness, opportunities & threats " (SWOT) framework that was advocated by Andrews (1971). The goal of business

strategy, seen through this prism of framework is to seek sustainable competitive advantage by entering (or positioning oneself within) industries and businesses that are either structurally attractive or can be made so through deliberate management actions. Using the SWOT framework, managers can derive an appropriate competitive strategy and establish competitive priorities. The Operations Strategy framework by Hayes & Wheelwright (1980) can then be used to translate these competitive priorities into a set of supportive manufacturing decisions and policies.

Skinner stated that the proper role for an operations organization is essentially supportive in nature. He stated that, "*the purpose of manufacturing is to serve the company by configuring itself so that its entire apparatus is focused to accomplish the particular manufacturing task demanded by the company's strategy*"[10]

Hayes, Pisano and Upton[11], perceive the notion of "fit" as regards strategic coherence and internal consistency, on the premise that the primary goal of an operations strategy is to seek congruency between the company's chosen approach to competition and the way its operations are designed, organized, and managed.

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[10]Skinner W.; *Manufacturing: The Formidable Competitive Weapon* ; New York, Wiley, 1985 p. 56

[11]Hayes, Pisano & Upton ; Op. Cit. p.7

2.2 THE VALUE CHAIN

A business process is a collection of value adding operations having a preferred order, an identifiable beginning and an end. The inputs and outputs of the process are usually well defined and the activities are performed by cross functional teams.

The internal components of a firm can be divided into five primary and four support activities as shown on fig 2.1

Primary activities are those that are directly involved in the creation of a product or service; support services facilitate the creation of the product or service and its transfer to the customer.

Fig 2.1 THE VALUE CHAIN - PORTER (1985)

A wide variety of activities are conceptualized as being within the operations component of the value chain. These are the activities that transform the inputs into products and services (outputs) thereby adding value (utility). In addition, activities such as maintenance that keep the machines in working order would be also included in the operations segment of the value chain.

Porter[12] suggests that the value chain can provide an excellent method of examining the internal process of a firm and how these can be a source of competitive advantage. The way in which a firm configures and manages the processes within its value chain, he states, is an important determinant of how the firm creates value and incurs costs of production. This can be a great pillar to a competitive strategy such as cost leadership or differentiation.

2.3 OPERATIONS IMPROVEMENT TECHNIQUES

The need to improve the effectiveness of operations has, over time, given rise to a series of philosophies, tools and techniques such as Value Engineering, Quality Circles, Lean Manufacturing, Total Quality Management, and Business Process Re-engineering. The steady stream and changing nature of these methods and techniques vividly illustrate the evolution of the role of operations in organizations, and provide a window of insight into the general practical problems of building new operational capabilities.

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[12] Porter M.; *Competitive Advantage;* New York; Free Press (1985); p. 37

Common approaches to building improvement are characterized primarily by one of these approaches, with others as subsidiaries.

(a) Reconfiguring the Structure of the Operations Strategy

A common "top-down" approach to boosting the performance of an operation is a wholesale re-structuring of the operating strategy: through plant rationalization and construction, the installation of new technology and greenfield sites. The key challenge here is to provide a platform that will permit and encourage continued improvement once structural change is in place.

(b) Demonstration Projects

Demonstration projects provide an opportunity for a company to make a bold leap in its value adding capabilities. Such projects focus on one part of a company's total operation, usually in a particular department. In the "island" created by the project, it will assemble the very best people, ideas and technologies to show what can be done and how the operation may be carried out in a radically different way.

(c) Continuous Benchmarking Initiatives

The most valuable form of benchmarking for operations improvement is operational benchmarking, which compares one's own operations with another using physical, clearly measurable characteristics such as lead times, yields and defects. Physical measures tend to be more clearly and broadly understood than financial measures,

which lose credibility because they reflect different cost structures and engender misunderstanding about how the figures are calculated and what they mean.

(d) *Bottom –Up Improvement*

Building improvements from the ground is the implicit objective behind the Kaizen philosophy – an improvement system that focuses on small but continuos gains from existing processes through simplification, combination or elimination of non value adding activities. Many firms have shown tremendous improvement in performance as a result of what might be termed "grass-root" improvement efforts. People in operations are given more autonomy to seek out opportunities, either in teams or individually, and improve the operation's effectiveness.

According to **Imai**[13] **,** a lot of improvements in the value adding chain can be realized through re-engineering of the key processes by subjecting them to questions such as :-

- ⇒ Must the activity be carried out in this manner only?
- ⇒ Who should be doing what and when?
- ⇒ Are the resources employed yielding their maximum potential consistently?
- ⇒ What external or internal factors are affecting the process/operations ?
- ⇒ Is there any waste in the process?
- ⇒ Is it possible to improve the system's responsiveness?
- ⇒ Does the process contain non -value adding activities such as movement, inspection, set ups etc.?

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[13] Imai, M.; *Kaizen, The Key to Japan's Competitive Success* ;Random House; New York (1980); p. 211

2.4 MEASUREMENT OF PROCESS IMPROVEMENT

Measurement is a key core competency in industrial and systems engineering. The axiom "*You can't improve what you don't measure*" is very applicable in process improvement activities.

The Balanced Scorecard by **Kaplan & Norton**[14] provides a comprehensive framework that translates a company's vision and strategy into a coherent set of performance measures. It provides a holistic view of the short and long term health of the organization by capturing improvement results from four different perspectives as outlined below:-

(a) Financial Perspective

This focuses on the organization's strategic themes such as revenue growth, productivity improvement and investment strategy.

(b) Customer Perspective

This enables companies to align their core customer outcomes measures – satisfaction, loyalty, etc. – to targeted customer and market segments.

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[14] Kaplan, R.S, & Norton, D.P.; *The Balanced Scorecard: Translating Strategy into Action;* New York, Free Press, 1990

(c) Internal Business Perspective

This seeks to build the requisite internal capability by identifying processes that are most critical for achieving customer and shareholder objectives.

(d) Learning and Growth Perspective

The objectives in this perspective provide the infrastructure to enable ambitious objectives in the other three perspectives to be achieved.

The Balanced Scorecard stresses the importance of investing for the future and not just in traditional areas for investment such as new equipment and product development. Kaplan & Norton point out that organizations must also invest in their infrastructure – people, processes and procedures – if they are to achieve ambitious long term financial growth objectives. A good performance measurement system should have an appropriate mix of outcomes *(lagging indicators)* and performance drivers *(leading indicators)* that have been customized to the business strategy.

2.5 CONSULTANTS AND PROCESS IMPROVEMENT

Kasekende , in a research on Management consultancy in Kenyan organizations, noted that although the use of consultants can be an effective form of transfer of technology, there was a low level of utilization then.[15] However, according to a study on the growth and

development of USA's management consulting profession, **Myres & Skiling**[16], list the following reasons for their increased acceptance;

(a) Rapid Technological changes
(b) Need for effective long-range planning
(c) New burdens placed on corporate management
(d) Increased competition
(e) Need for new form of information

And according to **Ira**[17] , a firm may want to retain a management consultant for a combination reasons such as;-

(a) their possession of unique skills in some specialized area
(b) the need for outside objectivity
(c) un-availability of needed skills in the full time market place
(d) their past experience in similar problems
(e) top management greater respect for outside rather than internal opinions
(f) other pressing demands on time of company executives.
(g) Possibility of obtaining evaluation and training for company personnel.

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[15]Kasekende, C.S.; Op. Cit. pp. 40-45

[16]Myers, A & Skiling, D. ; Op. Cit. p.75

[17]Ira , S.G.; *Consulting Consultants,* Data Management,(1980) p. 96

Based on these studies, the current level of competition in the manufacturing industry in Kenya, and the literature review on operations improvement techniques, the following propositions are made on process improvement consultants;-

(a) The consultant, being an outsider, offers the critical "*alternative view*" unlike the employees who performed the operations in the same manner over a long period.

(b) The consultant has wide experience gained with many clients requiring a diversity of techniques. He or she can thus benchmark the processes to establish performance gaps. Exposure to performance levels that other operations have been able to achieve encourages people to seek causes *(providing the basis for new learning)* and allows them to assimilate entirely different ways of performing comparable tasks.

(c) The Consultant is an independent adviser free from the internal management organization structures that can impede co-operation from all departments in the firm. He or she is in a position to "break-free" existing inhibitive norms in the company and also challenge and motivate people in the organization to become pioneers and free themselves of the bureaucratic bonds which may have been stifling their imagination and careers.

(d) The Consultant, depending on the contract, remains focused on the agreed objectives with little interference from other activities taking place in the organization. He or she thus keeps the entire process improvement team on course, even when the day-to-day activities threaten to break it apart.

CHAPTER THREE

RESEARCH DESIGN

3.1 TYPE OF RESEARCH

This research was conducted in two parts, part I being a survey of the current consulting practices among consulting firms in Nairobi. This pre-study investigation was necessitated by the scarcity of empirical data regarding the operations and services of consultants in Kenya, especially in the post economic liberalization period, i.e. 1995 – 2000. The survey covered four consulting houses in Nairobi and was in the form of personal interviews using an interview guide (see Appendix II)

Part II of the research, which is the main subject of this report, was a survey of 100 manufacturing companies in Nairobi. The sample was drawn from the 432 members of Kenya Association of Manufacturers. The study population was selected through a systematic sampling method where all the Nairobi based companies (356 in all) were listed and the required 100 selected using an interval of 3.

3.2 DATA COLLECTION METHOD

The data was collected using a self administered questionnaire addressed to the Chief Executive Officers of the selected companies who were at liberty to have it attended to by the Head of Manufacturing. The drop and pick method was used with follow-ups being done using the telephone and E-mail. Two research assistants were engaged to perform the

exercise and after a period of 3 months, 62 duly completed questionnaires had been received.

The decision to limit the research to manufacturing firms in Nairobi was aimed at keeping the costs down. Since all manufacturing firms go through the process of transforming inputs into outputs, it was expected that the responses would not be influenced by the variation of these transformation process among the various companies. However, a question on the magnitude of operation costs (as a percent of annual turnover) was included in the questionnaire to give an indication on the relative significance of process improvement to each organization.

3.3 RESEARCH VARIABLES

The main thrust of the study was a survey of perceptions on various aspects of process improvement consultancy with the following key variables:-

a) Perceptions of a process improvement consultant
b) Areas that would attract the services of a process improvement consultant.
c) Performance indicators for a process improvement consultant's involvement.

The 5-point Likert scale was used in the questionnaire to give respondents a wider selection and also allow for scores to each section to be plotted on frequency diagrams for easier data interpretation. This method has also been used by Kasekende (1984) and Odette (1982).

CHAPTER FOUR

ANALYSIS AND PRESENTATION OF RESULTS

4.1 DIAGNOSTIC SURVEY OF CONSULTING FIRMS

This research was conducted in two parts, part one being a survey of the current consulting practices among consulting firms in Nairobi. This pre-study investigation was necessitated by the scarcity of empirical data regarding the operations and services of consultants in Kenya, especially in the post economic liberalization period, i.e. 1995 – 2000. The diagnostic survey covered four consulting houses in Nairobi and was in the form of personal interviews using an interview guide (see Appendix II).

4.1.1 FINDINGS

Popular Services Among Clients

The survey showed that the top five consultant services sought after by clients , in descending order, are as shown on table 3:1.

Table 3:1 – Leading Consulting Services

	1980s		1990s
	SERVICE		**SERVICE**
1	Market Research	1	Strategy Formulation
2	Organization Design & Development	2	Market Research
3	Human Resources Management	3	Information Technology
4	Investment and Finance	4	Human Resources Management
5	Management Training	5	Management Training

These findings differ slightly from those from studies conducted by **Odette**[18] (1982) and **Kasekende**[19] (1984), indicating that changes in the business environment have had an impact on the practices of consulting firms.

Consulting Methodology

The survey revealed that management consulting firms mainly employ two client intervention methods in their practice.

i. Project Method

This is mainly an agreed upon project where the consultant works with the clients' selected representative(s) to study a given problem and make recommendations in form of a report.

ii. Training Facilitation

The consultant conducts training sessions on given management topic(s) at the clients premises or a hired venue.

Performance Measurement

There is no formalized consultant performance evaluation method among most of the management consulting firms. The consultant's retainer is based on the contact hours, irrespective of the outcome of the consultant's recommendations. Any follow up work would normally attract additional charges.

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[18] Odette , D.N. *; Management Consultancy and the Transfer of Management Technology in Kenya;* MBA thesis, University of Nairobi, 1982; pp. 36-78

[19] Kasekende, C.S.; .. Op..Cit.p. 45

Process Improvement Consulting

All the consulting houses surveyed have handled process improvement assignments but all have been of large scale Business Process Re-engineering (BPR) type which entailed reconfiguring the structure of operations to meet some strategy. There was no evidence of consultants' involvement in continuous process improvement initiatives, especially those involving the operatives or in-house productivity improvement teams. The consulting firms believe that most manufacturing companies are not aware of the potential for improved competitiveness that exits in such an alliance.

The findings of this pre-study survey helped crystallize the main research problem and formed the basis on which it was structured and conducted.

4.2 PART TWO - THE MAIN STUDY

Part two of the research, which is the main subject of this report, was a survey of 100 manufacturing companies in Nairobi. The sample was drawn from the 432 members of Kenya Association of Manufacturers.

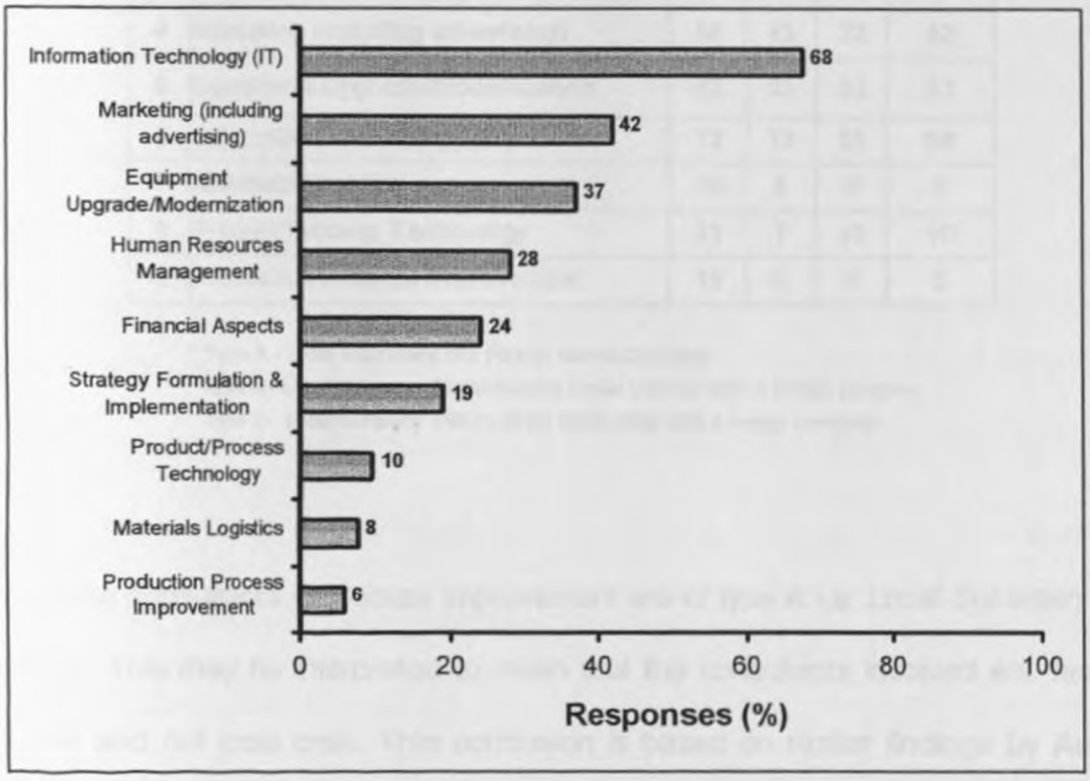
The main thrust of this study was a survey of perceptions on various aspects of process improvement consultancy with the following key variables:-

a. Perceptions of a process improvement consultant
b. Areas that would attract the services of a process improvement consultant.
c. Performance indicators for a process improvement consultant's involvement.

4.2.1 CONSULTANT SERVICES

Chart 4.1 shows the frequency distribution of various consultant services rendered to the companies in the last two years. Information Technology (IT), with 68% responses, was the most sought after service while, Production Process Improvement, with 6% responses, the least.

Chart 4.1 – Consultant Services Utilization



These findings concur with the pre-study survey of Consulting Houses which indicated that there is little demand for process improvement services among Kenyan organizations. It is noteworthy, from table 4.1, that all the companies that indicated

Table 4.1 – Utilization of Consultant's Services

	SERVICE	TYPE OF COMPANY *			OVERALL
		A	B	C	
		Percentage Responses			
1	Human Resources Management	46	21	5	28
2	Strategy Formulation & Implementation	27	20	9	19
3	Financial Aspects	31	14	22	24
4	Marketing (including advertising)	58	43	22	42
5	Equipment Upgrade/Modernization	42	36	32	37
6	Information Technology (IT)	73	78	55	68
7	Materials Logistics	15	8	0	8
8	Product/Process Technology	11	7	10	10
9	Production Process Improvement	15	0	0	6

* Type A - Local Subsidiary of a Foreign Based Company
Type B - Local Company Manufacturing Under License from a foreign company
Type C- Local company with no direct relationship with a foreign company

involving consultants in process improvement are of type A i.e. *Local Subsidiary of Foreign Firms).* This may be interpreted to mean that the consultants involved are "*head quarter*" based and not local ones. This conclusion is based on similar findings **by Aosa**[20] and **Kasekende.**[21]

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[20] Aosa , E. ; Op. Cit. pp. 190 -272

[21] Kasekende Op.Ct.p. 45

4.2.2 PERCEPTION OF PROCESS IMPROVEMENT CONSULTANTS

Table 4.2 summarizes the study's findings on the perception of consultants among the companies surveyed. From these results, three distinct interpretations, i.e. positive, neutral or negative points, based on the 5-point Likert scale used, on the following basis; **positive points** –*those that support consultant's intervention*, **neutral** – *those that neither support nor discourage*; and, **negative** – those that discourage consultant's involvement.

Table 4:2 – Perceptions of a Process Improvement Consultant

	A Process Improvement Consultant might;	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree	**Total**	Deduction (+ve or -ve) *see text*
		Percent Responses						
(i)	Not have the necessary skills to deal with a unique manufacturing process such as ours	5	50	8	29	8	100	negative
(ii)	Not fit at all in our management culture	4	39	10	39	8	100	neutral
(iii)	Leak company secrets to undesirable persons	3	37	27	31	2	100	neutral
(iv)	Not be available when required	2	38	19	38	3	100	neutral
(v)	Not be popular with our employees	3	60	8	29	0	100	negative
(vi)	Be too expensive for the company to afford	4	48	6	37	5	100	negative
(vii)	Not be required at all at this time	11	14	18	47	10	100	positive
(viii)	Abandon us when his ideas fail	1	26	15	55	3	100	positive
(ix)	Make himself indispensable	10	11	25	54	0	100	positive
(x)	Be an indication of our failure to handle our own problems	5	0	0	83	12	100	positive

(i) Positive Points

A process improvement consultant might:-

-Be required at this time
-Not abandon the company when his ideas fail
-Not make himself indispensable
-Not be an indication of the company's failure to handle its own problems

These positive perceptions of the consultants are an improvement of the views recorded in the study by **Kasekende**[22] and thus confirm **Myers**[23] findings that increased competition can be a reason for change in attitudes towards management consulting profession.

(ii) Negative Points

The study reveals that, among the manufacturing firms, a process improvement consultant might;-

-Not have the necessary skills to deal with unique processes
-Not be popular with a company's employees
-Be too expensive for the company to afford

These findings agree with those by **Kasekende**[24] and can be interpreted as the main reason why the manufacturing sector in Kenya is still reluctant to engage process improvement consultants.

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[22] Kasekende, C.S.; Op. Cit. p. 38

[23] Myer's A. & Skiling, D. ; Op. Cit. p.75

[24] Kasekende, C.S.; Op. Cit. p.42

(iii) Neutral Points

From the frequency distribution (table 4.2), there is no clear conclusion on the following;

That a process improvement consultant might,

Not fit in a company's management structure
Leak company secrets to undesirable persons
Not be available when required

This outcome may be attributed to the little exposure to consultants the respondents may have had. The "undecided or in-between" stance taken on these factors about the consultant may have been due to a combination of the positive points such a person may possess with the "heard or perceived" negative attributes associated with consultants in general.

4.2.3 POSSIBLE ASSIGNMENTS

Table 4.3 shows a distribution of the percent scores received for various possible assignments for a process improvement consultant. A column on the weighted score (based on the indicated 5-point Likert scale) is also appended.

The tasks with the highest scores are seen to be those relating to equipment productivity improvement, i.e. equipment set up reduction-76.2%, and equipment cycle time improvement-76%. This is perhaps due to the industry's realization that there exists potential for improvement in the production equipment installed.

Table 4.3 – Scores for Possible Consultant Assignments

	SCORE*	5	4	3	2	1		
	ASSIGNMENT/TASK	% Distribution					**Total**	Weighted Score
(a)	Ergonomics Improvement	10	42	19	15	14	100	**63.8**
(b)	Inventory Management	19	66	9	6	0	100	**74.2**
(c)	Equipment Set Up Times Reduction	14	74	3	6	3	100	**76.2**
(d)	Equipment Cycle Time Improvement	14	74	3	5	4	100	**76.0**
(e)	Equipment Idle Time Reduction	16	54	11	13	6	100	**65.6**
(f)	Process Standardization	22	52	13	13	0	100	**68.8**
(g)	Materials Handling	3	34	13	43	7	100	**48.8**
(h)	Labour Optimization	13	17	32	38	0	100	**41.8**
(ii)	Production Supervision	0	10	3	77	10	100	**40.8**
(j)	Quality Assurance Systems Improvement	32	44	6	18	0	100	**74.4**
(k)	Safety Assurance Systems Improvement	10	52	1	34	3	100	**65.8**
(l)	Facilities Layout	4	34	8	48	6	100	**51.6**
(m)	Production Scheduling	5	45	8	40	2	100	**57.4**
(n)	Work Measurement	5	66	15	14	0	100	**63.4**
(o)	Work Study and Improvement	8	76	10	6	0	100	**71.2**

* **Score: 5** -Very Appropriate **4** - Appropriate **3** - Undecided **2** - Inappropriate **1**- Very Inappropriate

It is noteworthy that Safety and Quality Assurance systems' improvement is also highly regarded by the companies sampled. This attention to effective and efficient quality assurance systems may be attributed to the proliferation on relatively cheap and high quality imports in the markets. The concern for safer working places may be due to the recognition of the production losses that emanate from unsafe or ergonomically inferior working conditions.

4.2.4 PERFORMANCE INDICATORS

The responses received on performance indicators suitable for a process improvement consultants' involvement in an assignment are as shown on the table 4.4 . From the table, it emerges that most of the manufacturing companies surveyed would prefer to evaluate the consultant's input from a financial perspective, i.e. annual profit growth - 87% score, reduction in operating costs - 86.8%, and savings realized from projects completed - 87%.

Table 4.4 – Scores for Consultant's Performance Indicators

	SCORE*	5	4	3	2	1			Weighted
	PERFORMANCE INDICATOR	Responses Distribution - (%)					Total		Score
(a)	Annual Profits Growth	69	8	12	11	0	100		87.0
(b)	Reduction in Operating Costs	67	15	3	15	0	100		86.8
(c)	Increase in Staff Morale	17	31	4	44	4	100		62.6
(d)	Reduction in Accidents	12	33	13	38	4	100		62.2
(e)	Reduction in Equipment Downtime	27	47	6	20	0	100		76.2
(f)	Reduction in throughput time	62	27	0	11	0	100		88.0
(g)	Increase in output per day	34	37	8	18	3	100		76.2
(h)	Staff Turnover Reduction	10	26	16	27	21	100		55.4
(i)	Rejects Rate Reduction	15	60	6	19	0	100		74.2
(j)	Lead Time Minimization	10	31	19	27	13	100		59.6
(k)	Share price improvement	3	27	8	22	40	100		46.2
(l)	Savings realised from projects completed	44	50	3	3	0	100		87.0
(m)	Growth in market share	32	39	10	16	3	100		76.2

* **SCORE** **5** -Very Appropriate **4** - Appropriate **3** - Undecided **2** - Inappropriate **1** - Very Inappropriate

CHAPTER FIVE

SUMMARY AND CONCLUSIONS

5.1 SUMMARY OF THE STUDY AND ITS RESULTS

This study was set up and conducted to explore Kenya's manufacturing sector's perception of process improvement consulting. The population consisted of 100 randomly selected Kenya Association of Manufacturers (K.A.M) members. The variables under investigation were :-

(a) Perceptions of a process improvement consultant
(b) Areas that would attract the services of a process improvement consultant.
(c) Performance indicators for a process improvement consultant's involvement.

The study's findings are as follows;

5.1.1 PERCEPTION OF A PROCESS IMPROVEMENT CONSULTANT

From ten view points on what a process improvement consultant might be, the study's results are as shown on table 5.1 on the following basis; **positive points** –*those that support consultant's intervention*, **neutral** – *those that neither support nor discourage*; and, **negative** – those that discourage consultant's involvement.

Table 5.1 – Summary of the Perception of a Process Improvement Consultant

Positive	Neutral	Negative
1.*Be required at this time* 2.*-Not abandon the company when his ideas fail* 3.*Not make himself indispensable* 4.*Not be an indication of the company's failure to handle its own problems*	1.*Not fit in a company's management structure* 2.*Leak company secrets to undesirable persons* 3.*Not be available when required*	1.*Not have the necessary skills to deal with unique processes* 2.*Not be popular with a company's employees* 3.*Be too expensive for the company to afford*

The positive perceptions of the consultants are an improvement of the views recorded in the study by Kasekende (1984) and thus confirm Moore's (1997) findings that, increased competition can be a reason for change in attitudes towards management consulting profession.

The conclusion drawn from this is that any efforts to market process improvement consultants should be geared towards un-doing the negative perceptions. Thus a bottom – up approach to process improvement would be suitable in a sector that does not believe that an "outsider" can quickly understand their unique processes and make meaningful contribution that can be supported by other employees. This suggestion is based on the work of **Schonberger (1986),** who wrote that a bottom up process improvement possesses the following features:-

a. ***Simplicity*** – any one, including the front line staff can follow.
b. ***Overwheling logic*** – the end results are seen from the very beginning

c. ***Quick visible results*** – big improvements follow on without much effort

d. ***Low cost*** – minimum investment in machinery or labour is required to achieve the results

e. ***Personal excitement*** – the exercise is fulfilling and rejuvenating to the participants.[25]

The perception that the consultant can be "*too expensive for the company to afford*" may lead to the conclusion that external financial assistance would be welcome by manufacturing firms willing to engage professional assistance but find the cost prohibitive. The responses to the question "*who would you prefer paid the consultant's fee?*" are as shown on table 5.2 below:

Table 5.2 – Preferences for the mode of Payment

Preference	Responses
The Company	27%
The Government	13%
A local body to which the company is a member and contributes for such a service	31%
An appropriate Non Governmental Organization (NGO)	0
The Company and the Government	29%

The results show that 60% of the companies prefer a cost sharing plan of one form or another, indicating that any efforts to market consulting services to the manufacturing sector should explore this avenue.

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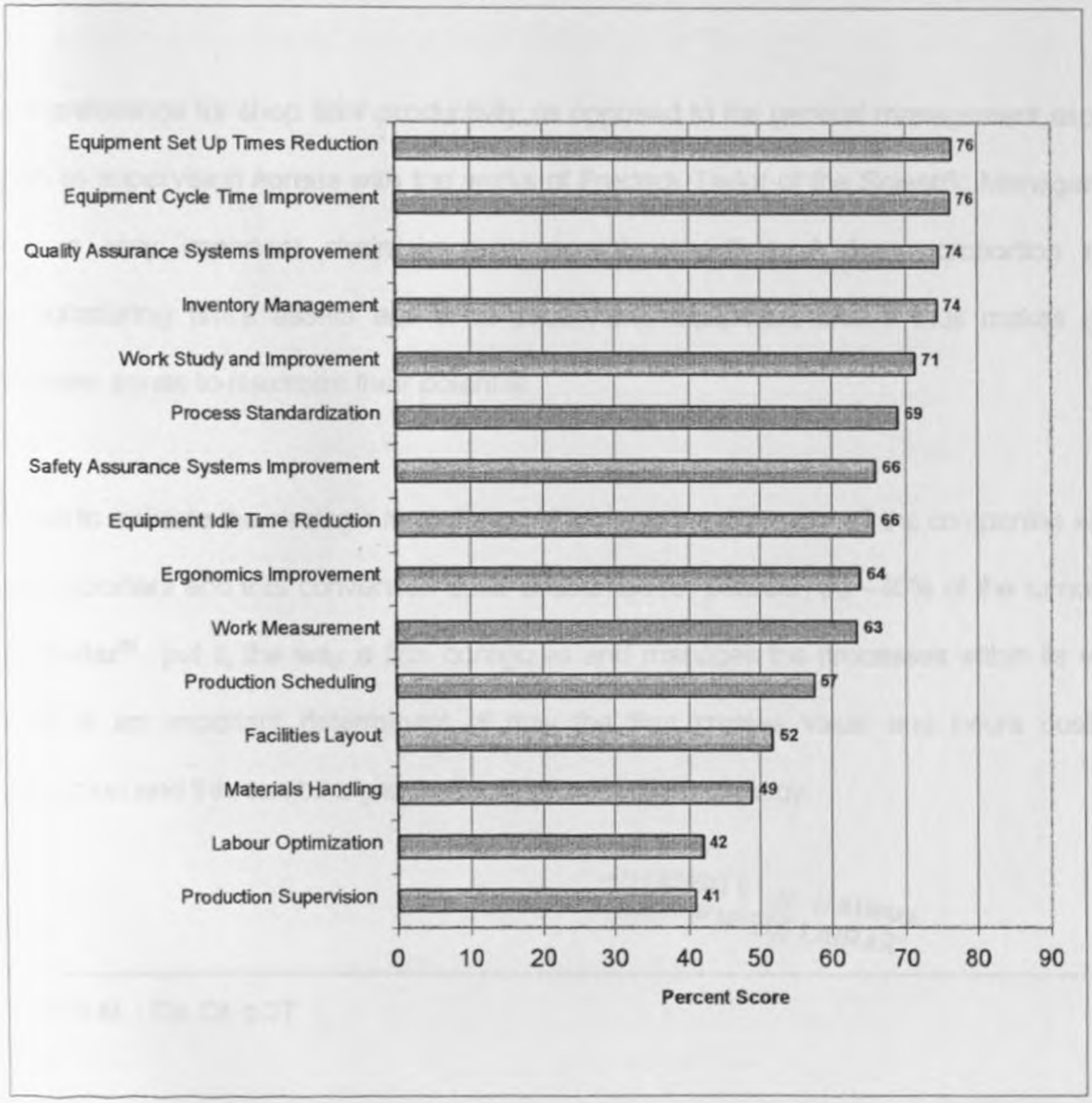
[25]Schonberger, R.J.; *Manufacturing: The Lessons of Simplicity Applied;* New York, The Free Press, 1986; pp. 167 -173

5.1.2 POSSIBLE AREAS FOR ASSIGNMENTS

The ranking of the possible areas in the value adding process that a process improvement consultant may be assigned are shown on chart 5.1 below

Chart 5.1 – Ranking of Possible Consultant Assignments



The tasks with the highest scores are seen to be those relating to equipment productivity improvement, i.e. equipment set up time reduction-76.2%, and equipment cycle time improvement-76%. This is perhaps due to the industry's realization that the greatest potential for business improvement lies in the equipment which forms the production processes.

The preference for shop floor productivity as opposed to the general management aspects such as supervision agrees with the works of Fredrick Taylor of the Scientific Management Era, a very important strain in management consulting. A large proportion of a manufacturing firm's assets are in its processing equipment and it thus makes good business sense to maximize their potential.

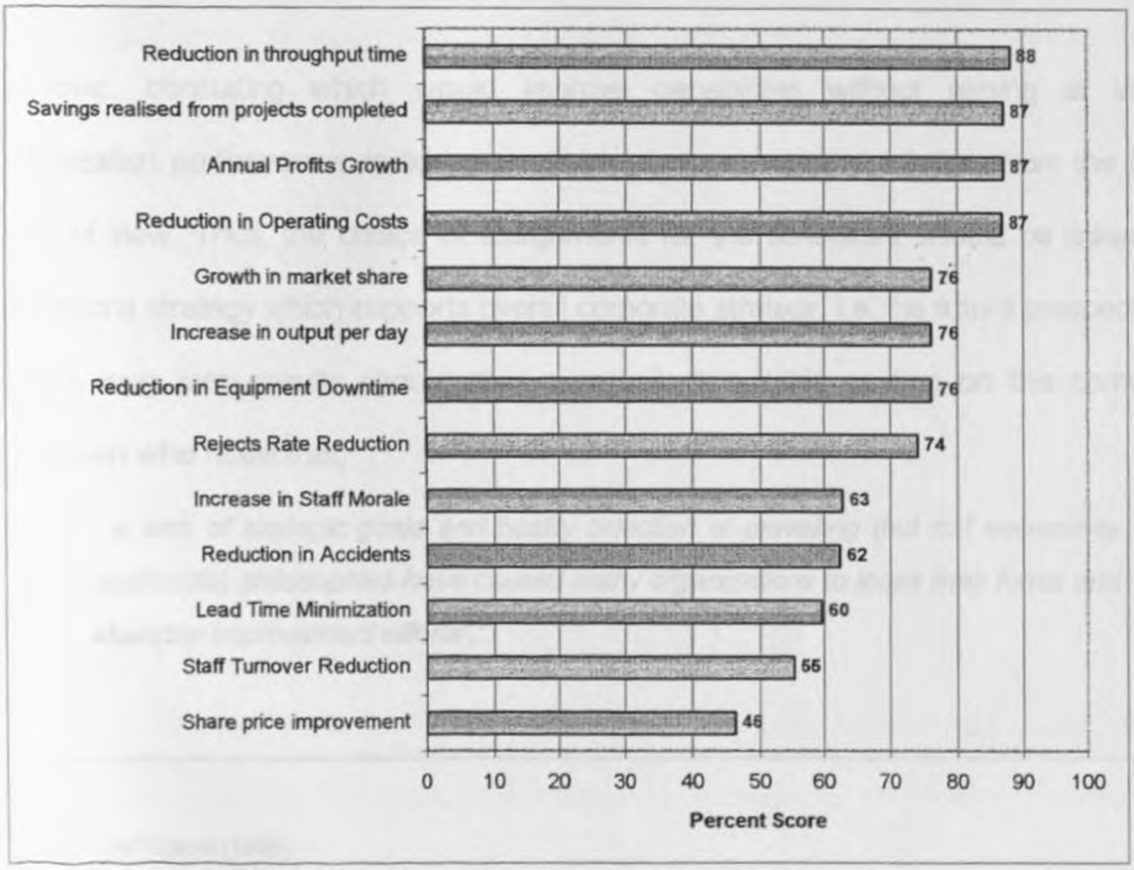
Asked to indicate the strategic importance of process improvement all the companies said it was important and that conversion costs accounted for between 30 –40% of the turnover. As **Porter**[26] put it, the way a firm configures and manages the processes within its value chain is an important determinant of how the firm creates value and incurs costs of production and this can be a great pillar to an operations strategy.

[26] Porter M. ; Op. Cit. p.37

5.1.3 PERFORMANCE INDICATORS

The study's findings on the ranking of possible performance indicators for a process consultants involvement are as shown on chart 5.2. From the chart, it emerges that most of the manufacturing companies surveyed would prefer to evaluate the consultant's input from a financial perspective, i.e. annual profit growth - 87% score, reduction in operating costs - 86.8%, and savings realized from projects completed - 87%.

Chart 5.2 – Ranking of Performance Indicators



The study results show a general inclination towards *lagging* indicators (financial) rather than towards *leading* indicators such as staff turn-over reduction or lead time minimization. This means that any consultants engaging in process improvement would need to convince the client on the need to rely on physical measures as these tend to be more easily captured and broadly understood in such cases than financial measures. As noted by **Hayes and Upton**,

> *" financial measures in continuous benchmarking initiatives lose credibility because they reflect different cost structures and engender misunderstanding about how the figures are calculated and the assumptions made."*[26]

However, consulting which would improve capabilities without aiming at improved organization performance could be an academic exercise, and a luxury from the financial point of view. Thus, the choice of assignments for the consultant should be linked to the operations strategy which supports overall corporate strategy, i.e. the future prospects of the client's long term results should always prevail. A suitable caution on this comes from **Goldman** who notes that,

> " *a lack of strategic goals and hastily selection of prevailing (but not necessarily applicable) philosophies have caused many organizations to loose their forms and abandon improvement efforts".*[27]

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[26]Hayes and Upton (1996)

[27]Goldman, S.L., *Agile Manufacturing: A new paradigm for Society*, Iococca Institute, Lehigh University, 1994. p.167

5.2 LIMITATIONS

The structure and design of this research was based on literature on the manufacturing practices in USA and Europe. Though the responses were obtained from Kenyan manufacturing firms, the conclusions arrived at assume a less hostile manufacturing environment than is currently prevailing in the country, i.e. relatively poor infrastructure, high cost of money, power rationing, etc. In such circumstances, a firm might find it prudent to lobby for a better economic environment first before embarking on internal process improvement.

Further, this research sought to investigate the manufacturing sector's perceptions of a ***hypothetical*** process improvement consultant and all responses received were on this basis. Thus, the conclusions drawn from this study are not representative of an actual situation and might differ, especially in an environment where macro –economic factors such as the cost of capital or the state of the infrastructure are not conducive for a manufacturing business.

5.3 SUGGESTIONS FOR FURTHER RESEARCH

This research was based an imaginary process improvement consultant who was assumed to exist and possess the requisite expertise to successfully undertake a manufacturing process improvement exercise. Having found out the industry's perception of such a person, it would be advisable to supplement these findings with those relating to the

consultant's qualities. It is thus suggested that further research may be carried on aspects such as the number, academic background, professional qualifications and experience of process improvement consultants in Kenya.

Appendix I

DEFINITION OF TERMS

1. **Management Consulting**
   An advisory service contracted for and provided to an organization by specially trained and qualified persons who assist, in an objective and independent manner, the client organization to identify management problems, analyze such problems, recommend solutions to these problems, and help when requested, in the implementation of solutions. (*Larry Greiner and Robert Metzger, Consulting to Management, Englewood Cliffs, New Jersey, Prentice-Hall, 1983)*

2. **Consultant**
   Applies to those persons who perform all or some of the typical consulting functions, on either full or part time basis.

3. **Client**
   Applies to any manager, administrator or organization using the services of a consultant.

4. **Consulting Firm**
   Any type of organizational unit whose function is to provide consulting services.

5. **Consulting process**
   The range of activities and the consultant-client interaction in solving the clients problems.

6. **Process Improvement Consulting**
   Consulting process specifically aimed at improving the goods or service production process

7. **Consulting assignment**
   The task, job, etc. being undertaken by a consultant.

8. **Operation**
   Any action performed by man or machine on raw materials, intermediate or finished products

9. **Production Process**
   A continuous network of operations and processes by which raw materials are converted into finished products.

APPENDIX II

INTERVIEW GUIDE

DIAGNOSTIC SURVEY OF CONSULTING FIRMS

1. Self introduction and purpose of interview.
2. The firm's name and brief profile.
3. What are the firm's main consulting services.
4. How is the demand for consultant services in Kenya?
5. Compare clients' needs in the early 90s and now.
6. What are the consulting methods used?
7. How is the consultant's input or performance measured?
8. Is the firm engaged in any process improvement consulting?
9. Any other pertinent information?
10. Appreciation of the respondent's time.

QUESTIONNAIRE - PROCESS IMPROVEMENT CONSULTING

SECTION ONE - GENERAL INFORMATION

COMPANY PROFILE

NAME : _____

MAIN BUSINESS : _____

TYPE OF COMPANY

(A) Local Subsidiary of a Foreign Based Company ☐

(B) Local company manufacturing under lincense from a foreign firm ☐

(C) Local company with no direct relationship with a foreign firm ☐

(D) None of the above *(Please specify)* ☐

RESPONDENT

POSITION / TITLE _____

SECTION TWO - GENERAL CONSULTANCY

In which of the following areas has your firm engaged a consultant in the last two (2) years?

1. Human Resources Management ☐
2. Strategy formulation and Change Management ☐
3. Financial Matters ☐
4. Marketing (including advertising) ☐
5. Equipment Upgrade/Modernization ☐
6. Information Technology (IT) ☐
7. Materials Logistics ☐
8. Product/Process Technology ☐
9. Production Processes Improvement ☐
10. Any Other *(please specify)*

SECTION THREE - PROCESS CONSULTANCY

Given that a Process Improvement Consultant is an expert on manufacturing processes and operations improvement techniques, and is available to work alongside your productivity improvement teams on part time basis, please provide your views on the following:

1. The Person

Such a consultant might;

	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
(i) Not have the necessary skills to deal with a unique manufacturing process such as ours	☐	☐	☐	☐	☐
(ii) Not fit at all in our management culture	☐	☐	☐	☐	☐
(iii) Leak company secrets to undiserable persons	☐	☐	☐	☐	☐
(iv) Not be available when required	☐	☐	☐	☐	☐
(v) Not be popular with our employees	☐	☐	☐	☐	☐
(vi) Be too expensive for the company to afford	☐	☐	☐	☐	☐
(vii) Not be required at all at this time	☐	☐	☐	☐	☐
(viii) Abandon us when his ideas fail	☐	☐	☐	☐	☐
(ix) Make himself indispensable	☐	☐	☐	☐	☐
(x) Be an indication of our failure to handle our own problems	☐	☐	☐	☐	☐

2. METHODOLOGY

If your company were to engage the services of a Process Improvement Consultant, which of the following would be preferable to your organization?

(i) The Consultant's fee should be paid by:-

1. The Company ☐
2. The Government *(through an appropriate Ministry)* ☐
3. A local body to which the company is a member and contributes for such a service ☐
4. An appropriate Non Governmental Organization (NGO) ☐
5. Other Method *(please specify)*

_____

ii) How long would your company wish to keep in touch with the consultant?

1. Less than one Year ☐
2. One to two years ☐
3. As long as it is necessary ☐
4. Will depend on his contribution ☐
5. Will depend on cost implications ☐

iii) Would your company agree to have the consultant arrange for a brainstorming/ideas exchanging forum with other Companies in the same program?

Yes	No
☐	☐

3. **Assignments /Tasks**

Which of these areas in the manufacturing processes management would your company involve such a Consultant? Please score them as per the following guide:-

5 -Very Appropriate 4 - Appropriate 3 - Undecided 2 - Inappropriate 1- Very Inappropriate

a) Ergonomics Improvement	5	4	3	2	1
b) Inventory Management	5	4	3	2	1
c) Equipment Set Up Times Reduction	5	4	3	2	1
d) Equipment Cycle Time Improvement	5	4	3	2	1
e) Equipment Idle Time Reduction	5	4	3	2	1
f) Process Standardization	5	4	3	2	1
g) Materials Handling	5	4	3	2	1
h) Labour Optimization	5	4	3	2	1
ii) Production Supervision	5	4	3	2	1
j) Quality Assurance Systems Improvement	5	4	3	2	1
k) Safety Assurance Systems Improvement	5	4	3	2	1
l) Facilities Layout	5	4	3	2	1
m) Production Scheduling	5	4	3	2	1
n) Work Measurement	5	4	3	2	1
o) Work Study and Improvement	5	4	3	2	1

(p) Others *(please specify)*

4. Performance Indicators

Which of the following would be appropriate performance indicators for the Consultants involvement? Please score them as follows:-

5 -Very Appropriate 4 - Appropriate 3 - Undecided 2 - Inappropriate 1 - Very Inappropriate

(a) Annual Profits Growth	5	4	3	2	1
(b) Reduction in Operating Costs	5	4	3	2	1
(c) Increase in Staff Morale	5	4	3	2	1
(d) Reduction in Accidents	5	4	3	2	1
(e) Reduction in Equipment Downtime	5	4	3	2	1
(f) Reduction in throughput time	5	4	3	2	1
(g) Increase in output per day	5	4	3	2	1
(h) Staff Turnover Reduction	5	4	3	2	1
(i) Rejects Rate Reduction	5	4	3	2	1
(j) Lead Time Minimization	5	4	3	2	1
(k) Share price improvement	5	4	3	2	1
(l) Savings realised from projects completed	5	4	3	2	1
(m) Growth in market share	5	4	3	2	1
(o) Others *(please specify)*					

SECTION FOUR

PROCESS IMPROVEMENT AS A COMPETITIVE STRATEGY

Please indicate the strategic importance of process improvement to your business. Use the following guide:-

5 -Very Important **4** - Important **3** - Not known **2** - Less important **1**- Not important at all

5	4	3	2	1

What is your organization's approximate annual conversion cost (production cost) as a percent of turnover

less than 10%	☐	Between 10-20 %	☐
Between 20-30%	☐	Between 30 -40%	☐
Between 40 -50%	☐	Between 50 - 60%	☐
Between 60 -70%	☐	Between 70 -80%	☐
Between 80-90%	☐	Above 90%	☐

Please score the following with regard to their importance to your company's growth/competitive strategy

5 -Very Important **4** - Important **3** - Not known **2** - Less important **1**- Not important at all

Production Capacity	5	4	3	2	1
Product Quality	5	4	3	2	1
Equipment Capability	5	4	3	2	1
Processing Technology	5	4	3	2	1
Production/Conversion Costs	5	4	3	2	1
Material Costs	5	4	3	2	1

====== THANK YOU ==========

APPENDIX III

LIST OF COMPANIES INTERVIEWED

PART ONE CONSULTING HOUSES

1. Pricewaterhousecoopers
2. Delotte & Touche
3. KPMG Peat Marwick
4. Fama Management Consultants

PART TWO LIST OF COMPANIES SENT QUESTIONNAIRES

	COMPANY NAME	RESPONDED?
1.	Associated Battery Manufacturers	Yes
2.	Auto Ancilliaries Ltd	
3.	Auto Brake Linning Manufacturers	Yes
4.	Avon Rubber Company	Yes
5.	BASF East Africa Ltd	Yes
6.	Bayer E.A.	Yes
7.	Beta Health Care International	Yes
8.	Blowplast Limited	Yes
9.	BOC Kenya Ltd	Yes
10.	Bonar E.A.	
11.	Booth Manufacturing	Yes
12.	Brass & Allied Works	
13.	British American Tobacco (K) Ltd	Yes
14.	Brook Garmets Manufactures	
15.	Brush Manufacturers Ltd	Yes
16.	Cadbury (K) Ltd	Yes
17.	Car & General (Industries)	Yes
18.	Central Glass Industries	Yes
19.	Chandaria Industries	
20.	Coates Ltd	
21.	Coca Cola Northern Africa	Yes
22.	Colgate Palmolive	Yes
23.	Cosmo Plastics	Yes
24.	Crown Berger (K) Ltd.	Yes
25.	Diversy Lever E.A. Ltd	Yes
26.	East Africa Spectre	Yes
27.	East African Breweries	Yes
28.	East African Conveyors	Yes
29.	East African Industries	Yes
30.	East African Packaging Ltd	Yes

	COMPANY NAME	RESPONDED?
31.	Ecolab E.A. Ltd	Yes
32.	Elson Plastics of Kenya	
33.	Elys Chemicals Industries Ltd	Yes
34.	Farmers Choice	Yes
35.	Firestone East Africa Ltd	Yes
36.	Galsheet Kenya	Yes
37.	General Motors Ltd	Yes
38.	General Printers Ltd	Yes
39.	Glaxo Welcome Kenya Ltd	Yes
40.	H - Young	Yes
41.	Haco Industries	Yes
42.	Holman Brothers (E.A.)	
43.	House of Manji	Yes
44.	Industrial Plant E.A.	
45.	Insteel Ltd	Yes
46.	International Distillers	Yes
47.	Inter-Silk Garment Manufacturers	Yes
48.	Johnson Wax	Yes
49.	KAM Industries Ltd	
50.	Kenafric Industries Ltd	Yes
51.	Kenya Builders and Concrete	Yes
52.	Kenya Cosmetic Industries Ltd	Yes
53.	Kenya Litho	Yes
54.	Kenya Wine Agencies Ltd	Yes
55.	Kenya Wood Industries	Yes
56.	Kiwi Brands	
57.	Kuguru Food Complex	Yes
58.	LG Harris & Co (E.A.) Ltd	
59.	London Distillers (K) Ltd	Yes
60.	MACS Phamaceuticals	Yes
61.	Mann Manufacturing Co. Ltd	
62.	Manson Hart Kenya Ltd	
63.	Mather & Platt (K) Ltd	
64.	Morris & Company	
65.	Murphy Chemicals	
66.	Nairobi Bottlers	Yes
67.	Nairobi Conveyors	
68.	Napro Industries Ltd	
69.	Nation Printers and Publishers	Yes
70.	Nestle Foods	

	COMPANY NAME	RESPONDED?
71.	Nova Chemicals	
72.	Novartis E.A. Ltd	
73.	Packaging Africa	
74.	Packwell Industries Ltd	
75.	Pfizer Laboratories	
76.	Premier Foods Industries Ltd	Yes
77.	Premium Drums	
78.	Prestige Packaging	Yes
79.	Procter & Gamble (E.A.) Ltd	Yes
80.	Proctor & Allan (E.A) Ltd	Yes
81.	Reckitt Benckiser	Yes
82.	Signode Packaging Systems	Yes
83.	Slumberland (K) Ltd	
84.	Smithkline Beecham Consumer Healthcare	Yes
85.	Soilex Chemicals	
86.	Steel Africa	
87.	Styroplast Ltd	
88.	Synresins Ltd	
89.	Tanna Industries Ltd	
90.	Tetra Pak Ltd	Yes
91.	The Wrigley Company (EA) Ltd	Yes
92.	Transallied Industries Ltd	
93.	Tru Foods Ltd	Yes
94.	TSS Spinning & Weaving Ltd	
95.	Twiga Chemicals	Yes
96.	UDV (Kenya) Ltd	
97.	Unga Feeds Ltd	
98.	Vaja Manufacturers Ltd	
99.	Victoria Steelwares	
100.	Virani Curry Powder	

APPENDIX IV
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