FACTORS CONSIDERED IN USING VERTICAL INTEGRATION STRATEGY: THE CASE OF MANUFACTURING FIRMS IN KENYA

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This research paper is my original work and has not been submitted for examination in any other University.

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2/11/93

DATE

This research paper has been submitted for examination with my approval as a University supervisor.

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Dedicated to my daughter, Marie

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ABSTRACT

The survey for this study reported here was carried out between March and July, 1992. The principal objective of the study was to identify the factors that the management of vertically integrated firms consider in making their decision to integrate either backward or foward. In order to meet this objective, the information sought for the study was collected through the use of a questionnaire. The sample consisted of 52 vertically integrated firms. 31 questionnaires were completed and provided the information used in this report.

The study found out that many factors influence the firm's decision to adopt vertical integration strategy. For all the manufacturing firms, the most important factors were: certainty of demand for the firm's products, availability of adequate manufacturing facilities, investment costs, and the need for high market share.

Analysis of the data by industry revealed that for the textile and steel manufacturers, certain factors were important. The factors were: the need for improved co-ordination for a firm's activities, need for synergies, need for greater control over the firm's economic resources, level of competition in the industry, size of the business, and stability of future costs. For the agro-based industries and the mining firms, the need to control the firm's econom-

ic resources, the need to build new infra-structures, size of business, and the level of competition in the industry were important.

It is appreciated that much remains to be done towards developing models that can be suitably used for empirically testing these factors to see their influence on such firms. The study suggests that further research is needed to determine whether vertically integrated firms perform better than those firms that are not.

CHAPTER 1

INTRODUCTION

1.1 BACKGROUND

The central factor examined at the beginning of strategy consideration is the business the firm is in or wants to be in. A firm will start by defining the business it is in and thereafter choose a strategy that will take it from its present position to that position it wants to be in.

The choice of these corporate strategies is done by managers - who deliberate on which strategy to adopt, depending on the firm's business goals, the market conditions and the resource situations which prevail at that time (Howe 1986). Some business goals include high Return on investment, growth in size and growth in market share.

A manufacturing firm that has defined its business objectives has a whole range of strategy alternatives which it can choose from. Such a firm can adopt either vertical integration strategy, or diversification strategy.

Various writers differ in their definition of the term vertical integration. Some concentrate on the form of ownership that vertically integrated firms possess over the adjacent firms while others stress on the distinct stages of processing. Those that concentrate on the form of owner-

ship stress the fact that a vertically integrated firm owns a hundred percent of the sources of its raw materials and a hundred percent of its distribution channels (Burns 1936, Blois 1972).

Professor A.R Burns (1936) defines vertical integration this way:

"Vertical integration relates to the combination of operations such that the finished product of one is the raw material for another."

This definition is also echoed by Blois (1972:353). He defines vertical integration as

> "the organization of production under which a single business carries on the successive stages in the processing and distribution of a product which is sold by other firms without further processing".

Glueck (1980) and Buzzell (1983) recognize the fact that firms can have different degrees of vertical integration. The firms that engage in more stages of production are said to be highly integrated while the firms that engage in less stages of production are said to be less integrated. These stages of production are distinct stages starting from the supply of raw materials to processing and distribution of the finished products. Glueck (1980) stresses these stages of production. He defines vertical integration strategy as:

> "the strategy of a corporation that enters into one or more stages in the process of manufacturing and distributing goods and services from raw materials to the final supply to consumers or users."

Buzzell (1983) defines it as

> "the combination, under a single ownership, of two or more stages of production or distribution (or both) that are usually separate".

Harrigan (1980) looks at vertical integration in terms of the business arrangements that are used to control the risks associated with supply of raw materials and channels of distribution. These business arrangements need not take the form of a hundred per cent ownership of the adjacent firms. They could take the form of controlling only the important sources of raw materials and distribution channels. She emphasises that firms need to control the sources of their raw materials and distribution channels only where they have advantages, like where the market forces are not working well and where the intermediaries are inefficient. The point she tries to convey is summarised in the following paragraph:

> "Briefly, the concept of vertical integration should be expanded to encompass a variety of arrangements by a firm. It can use outsiders (as well as its own business units) to forge an optimal vertical system for supplying goods, services and capabilities.....

From the above definitions it is clear that vertical integration involves extending the business definition of a firm either backward or forward, by owning some sources of raw materials and some distribution channels or both. The extension of the business definition backward is known as backward integration and the extension of the business defi-

nition forward is known as forward integration.

Backward integration occurs when a firm enters into the business of supplying some of its present inputs, while forward integration occurs when a firm moves into the business of distributing its outputs by entering channels closer to the ultimate consumer (Harrigan, 1985).

Manufacturing firms which adopt vertical integration strategy do so because they believe that it brings with it significant benefits in terms of synergies from shared resources, economies of scale, monopoly power and even profitability (Harrigan 1985). However, some pursue it in order to grow believing that growth brings with it profitability.

Those manufacturing firms which pursue vertical integration strategies identify the key characteristics of the environment and exploit them adequately. Such characteristics include industry characteristics concerning consumers, suppliers, competitors and so on. They also identify the internal factors such as the bargaining power, the human resources they posess and their corporate objectives before they start exploiting them (Blois, 1972).

In most manufacturing firms, the strategy evolves from the need to control the sources of critical raw materials and distribution channels necessary for the firm (Glueck, 1980). A number of researches on vertical integration strategy (Buzzell, 1983; Harrigan, 1985), hold that there

exists an optimal investment level where vertical integration leads to better performance. At this optimal level, investment intensity does not hurt profitability. This implies that firms have to consider certain factors that are favourable to the adoption of vertical integration as a strategy. Such factors include the firm's bargaining power relative to its suppliers, the available competition, its market share, the stage of the industry development and corporate needs (Harrigan 1984,1985). These corporate needs refer to the firm's growth strategy, control over its sources of raw materials, the need to coordinate its operations, and so on.

Empirical work has been done to ascertain the influence of some of the factors mentioned above on vertical integration strategy. (Harrigan, 1985), tested the hypotheses that the industry's stage of development, volatility of competition, the firm's bargaining power and corporate mission has an effect on the firm's degree of vertical integration. Significant relationships were found in all cases.

Howe (1986) discusses certain risks associated with inability to balance the operations of a vertically linked firm. For example, the risk of excess capacity should be an important consideration when adopting vertical integration strategy. It is imperative that a firm matches the capacities of its manufacturing plants in successive operations brought together in a single process or else, the scale

difference may make it operate at an excess capacity or above full capacity. This scale difference among vertically integrated units suggests that firms must consider both their scale of operations and their market shares before undertaking vertical integration strategy.

Corporate policy makers therefore, have to consider the above factors before they adopt vertical integration strategy. Failure to do so may result in poor performance for the firm. There are firms in Kenya that are vertically integrated in more than one stage of production. They supply some or all of their raw materials and also engage in certain activities that could be done by other firms. Such firms are to be found in the agro-based industries, the mining industry, the steel industry and the textile industry (Coughlin P., et al). Certain firms also exhibit potential areas for vertical linkages and these are to be found in the motor vehicle assembly industry, and the cable industry.

In Kenya, forward integration is restricted by law: Cap 504 Section 23 (1) (a)¿. The law stipulates that:

> The minister shall keep the structure of production and distribution of goods and services in Kenya under review to determine where concentrations of power exist whose detrimental impact on the economy outweighs the efficiency advantages, if any, of integration in production and distribution; and in identifying unwarranted concentration of economic power he shall pay particular attention to the following factors:
>
> (a) a person controls a chain of distributing units the value of whose sale exceeds one-third of the relevant market category of goods sold by

the chain, comprising the national market in the case of a national chain or regional or urban market in the case of a regional or urban chain.

(b) a person, by virtue of controlling two or more physically distinct units which manufacture substantially similar products, supplies more than one-third of the value, at ex-factory prices, of the domestic market for the category of the goods into Kenya but excluding exports of the goods from Kenya; or

(c) a person has a beneficial interest, exceeding twenty per cent of outstanding shares, in a manufacturing enterprise, and simultaneously has a beneficial interest, however small, of outstanding shares, in one or more wholesale or retail enterprises which distribute products of the manufacturing enterprise; or

(d) a person has a beneficial interest, exceeding twenty per cent of outstanding shares, in a wholesale distributing enterprise, and simultaneously has a beneficial interest, however small, in one or more retail enterprises which distribute goods supplied by that wholesale enterprise.

For this reason, the other distinct stages of production like physical distribution of the firms products using their own transport and owning wholesale and retail facilities can only be done at the discretion of the minister concerned.

1.2 STATEMENT OF THE PROBLEM

Decisions on whether a manufacturing firm should adopt vertical integration strategy or not depends on whether the managers know the factors that influence the use of the strategy. Many pitfalls could be avoided if the manager knew which factors to consider as important.

The Restrictive Trade Practices, Monopolies and Price Control Act on the control of unwarranted concentrations of Economic power restricts integration in production and distribution by the same firms. This implies that very few firms would be involved in forward integration into wholesaling and retailing. The government policy, therefore would be an important consideration in evaluating reasons for vertical integration.

The government owned manufacturing firms (the parastatals) and other foreign owned firms are subjects of government protection through tariffs. This imply that vertically linked firms should have good performance. Government owned firms are subject of much criticisms for failure to achieve their target returns and most of them frequently experience both financial and managerial problems. It would be useful to find out whether performance is one of the considerations of such firms.

The ownership and structure of vertically linked manufacturing firms may influence the choice of such a strategy. It may be true that managers in non government

owned firms have different attitudes towards vertical expansion, different from those of parastatals. It would be important to know whether corporate goals and policies are important considerations for the choice of such a strategy.

The availability of capital for investment purposes is one of the prerequisites for vertical expansion. In the Kenyan environment, the manufacturing firms are either funded by their parent companies (in the case of foreign owned firms) or by the government through foreign aid or by joint ventures. It would be important to find out whether the availability of capital for further investment influences the firm's decision to go into vertical linkages.

Other factors that are often cited such as the need for improved marketing, need to protect superior knowledge over the operations of the industry, the need to maintain technological leadership, need to explain to the consumers how to use the product, synergies, size of the business and stability of future costs are also theoretical considerations which have not been tested in the Kenyan context. It would be interesting to find out if these factors are important before vertical linkages take place. Other factors that may not have been considered in the literature review and play part in choosing the strategy may also be identified. Therefore, the basic research question is "What are the factors that firms consider in using vertical integration strategy?" This invaluable information which is helpful in guiding managers in their strategic choice is scant in

literature from the standpoint of the Kenyan business practitioners and the academics.

1.3 OBJECTIVE OF THE STUDY

The main Objective of this paper is to find out the factors, in the order of their importance, that managers consider important in using vertical integration strategy.

1.4 THE IMPORTANCE OF THE STUDY

It is hoped that the findings of this study will be of interest to:

(a) the management of various manufacturing firms who may wish to know what factors are to be considered in using vertical integration strategy.

(b) Scholars who may wish to use the findings of the study for further research on the subject.

1.5 OVERVIEW OF THE STUDY

This project is made up of five chapters. Chapter 1 discusses the background to the study, the statement of the problem, the objectives of the study and the importance of the study. In chapter 2, the literature relating to the study on vertical integration, both in Kenya and elsewhere is explored. In the same chapter potential areas for vertical integration is given. In Chapter 3, the project re-

search design is discussed. The results of analysis is presented in Chapter 4 and Chapter 5 discusses the limitations of this study and suggestions for further research.

CHAPTER 2

LITERATURE REVIEW

2.1 GENERAL STUDIES ON VERTICAL INTEGRATION

The decision to adopt or not to adopt vertical integration strategy can be influenced by a number of factors which have already been mentioned. One of such factor is performance. A firm may pursue vertical integration strategy so that it performs better in terms of its return on investment. The evidence that some vertically linked firms perform better under certain conditions was found by Buzzell (1983). He found out that firms that choose an optimal point of investment with integration can earn higher profits. Apart from earning higher profits, Manke (1971) also identified certain economies of integration that a firm can gain from. One of such economies arises from controlling a firm's economic resources.

Harrigan (1984) developed a contingency approach as to when firms are advised to adopt vertical integration strategy. She tested a number of hypotheses (Harrigan, 1985) and came up with empirical evidence on when firms should develop higher degrees of vertical integration and when it is advisable not to adopt the strategy. The factors she tested were the type of products the firm possess, its technology, bargaining power, environment, and performance. These are discussed in the succeeding paragraphs.

A firm's type of products may influence its decision to adopt vertical integration for several reasons. One of the reasons given for this is that firms with differentiated products can charge higher prices for them and hence get higher profits. Firms with products which are not differentiated face greater risks when demand is uncertain than their counterparts. Firms with complex products that require demonstrations, explanations and servicing can also integrate forward toward the consumer. The major purpose for integrating forward is to explain how their products are used and sometimes to prove their products superiority to risk averse customers. For example, a textile firm with a new clothing material can integrate forward into tailoring to prove to the users the viability of the fiber and can even further integrate into garment manufacture using the final material to prove to the consumers how good the clothes made from it can be.

Proprietary knowledge over a firm's products may influence its decision to use vertical integration strategy. Harrigan (1985), acknowledges that firms with trade secrets that protect products may also need to integrate the stages of production. This is because such firms have better opportunities to capture more value added margins from either backward or forward linkages.

The firm's technology also influences the firm's decision on whether to adopt or not to adopt vertical integra-

tion strategy. A firm with technology that offers substantial integration economies will not suffer the risks of having excess capacities. Evidence was found out by Kandwalla (1974) that firms with capacities that offer integration economies can charge higher prices for their products to offset the costs. Such firms are can make differentiated products using the machinery they possess and thereby get more market share than their competitors.

A firm with a large **market share** can integrate backward and/or forward because it is assured of market for its products. Buzzell (1983) in his study of whether vertically integrated firms were profitable found out that those firms with large market shares were profitable while the ones with small market shares were not. The explanation for this is that firms with a small market share face demand uncertainty and if they are vertically linked, then they even face the greater risks of excess capacities. Such a firm may end up producing more than what the consumer requires because it is stuck up with its own raw materials and machineries or may have its machineries lying idle because it is not producing enough raw materials.

The **bargaining power** a firm has over its suppliers can influence its decision to use vertical integration of the strategy. Harrigan (1985) found out that firms with high bargaining power can persuade outsiders to perform the low value added tasks for them such as supplying them with raw materials at the times when they require them and in the

right quantities. Indeed such firms have the power to get raw material supplies through contracts with the suppliers; and could distribute through agents, thereby controlling other firms assets without really owning them Porter (1974,1976). Such a situation would arise when the suppliers and distributors heavily rely on the firm to purchase their raw materials and bring their finished goods for distribution and would do everything to maintain this position. Blois (1972) explains that manufacturing firms in vehicle production can possess such bargaining power over component producers such that they only produce for them and in the specification and the amounts they require. Firms with high bargaining power do not need to integrate into raw material supply or into distribution because others can assure them of this supply. The firms with high bargaining power exhibit the characteristics of being market leaders, and having rapid and positive sales growth.

The environment in which the firm operates also influences its use of vertical integration strategy. Firms in turbulent environments where technology changes occur rapidly are ill advised to adopt vertical integration. This is because such firms face uncertain demand for their manufactured products and their ability to use all their manufacturing facilities. In turbulent environments where technology changes are rapid, the firm that has integrated

backward or forward may be stuck with obsolete processes or assets in the form of machineries and equipments. Harrigan (1985) explains this to be due to different models of facilities that will be coming into the market frequently (Harrigan 1985). Firms in turbulent environments may also face volatile competition. Volatile competition can lead to price wars with all the firms trying to cut down the prices of their products so as to sell. The price wars will reduce industry wide profits (Harrigan 1985).

Growth has been suggested as one of the reasons for integration in manufacturing firms for undertaking vertical integration strategy. Most firms associate the ability to grow with challenge and high profitability. A growing firm is seen as capturing the available market share (Buzzell, 1975), and is also seen as a market leader (Manke, 1972). A growing firm can get and retain quality management as the managers will find opportunities for self advancement (Marris, 1964). Such managers will have increased morale and it will be likely that management turnover will be low. Certain manufacturing firms therefore adopt vertical integration strategy in order to grow in terms of market size, level of operations and even profitability (Glueck 1980). Evidence was found out by Buzzell (1972) that as a firm grows, its market share increases, its profitability increases and its return on investments increases. The possible explanation their study gives for the finding is that as a firm grows, the market share increases and the

business is likely to have higher profit margins, a decline in marketing costs as a percentage in sales and higher quality management. Buzzell (1972) goes ahead to explain that this market power which growth confers upon a firm permits the manufacturing firm to bargain more efficiently when procuring raw materials, and when administering prices. Such firms take advantage of the learning curve to reduce the per unit cost of products sold, thereby increasing profits (Buzzell 1975). He also cautions that the association of growth with high performance at all levels is not the absolute truth because too much growth may reduce efficiency since there will be very high pressure from competitors among the growing firms in the industry.

Synergy has also been considered to be an important reason for vertical integration. Synergy arises from the fact that firms can gain more as one single unit - either supplying their raw materials, processing and/or distributing their finished products - than when they operate as different units. Harrigan (1984) found out the evidence that vertically integrated units gained from shared resources and such firms increased their wealth. Such firms or units can share such resources as manufacturing facilities, distribution channel, distribution facilities, warehouses, research and development marketing and technological information among others. Kay (1982, 1984) also found out that vertically integrated firms share many other infra-structur-

al facilities and achieve more by working as single units than as separate independent firms. Economies of information exchange has been cited by Porter (1980) as one of the reasons for vertical linkages. The costs of information exchange arise from the inability of the firm to convince the other parties in a transaction that it is a good risk and can undertake or negotiate a contract. An example of a manufacturing firm that could not carry out a business with contractors was The Ford Motor Company during the early years of its operations Harrigan (1984). There were no component producers at that time as there were no vehicles and nobody knew how to produce components or the viability of the project. Ford Motor Company had to integrate all stages of production, from component production to distribution. Vertical integration therefore acts as a self insurance to such firms who know that they are good risks but are priced out of the market because of information costs. A firm may therefore avoid misrepresentation risks which arise from information distortion by those firms which assume the responsibilities of collecting and disbursing information. Such a firm may integrate to get raw materials and market channels at the time they need it Williamson (1970). The cost of information exchange therefore arises from the price of obtaining or giving information about sources of raw materials required, and about market channels.

The elimination of transaction costs has also been cited as a major motive for vertical integration. Transaction costs are the costs of the whole range of functions like purchasing, pricing, negotiating among others that are incurred when separate firms own two or more stages of production. Williamson (1985), in his research on transaction cost economies included also the the costs of drafting and monitoring contracts to ensure harmonious trading between the trading parties. With backward and forward integration, these transaction costs will be reduced. The reduction in these transaction costs can lead to lower total costs and relatively higher profit margins for the vertically integrated firms. The costs of duplicated overheads will be reduced for those operations which can be done once for a single organization. Such operations are distribution, sales promotion, advertising, research and development and others.

Certain manufacturing firms adopt vertical integration strategy in order to control their critical sources of raw materials. An analysis of managerial goals in mergers and acquisitions by Walter and Barney (1990) found out that vertical mergers are a key mechanism through which managers control critical dependencies with firms in their environment. The development of the practice of vertical integration in North America between 1896 and 1900 arose from the need by the steel producers to control their sources of the

supply of iron ore and coal so that they could gain monopoly power over them. They wanted to get better performance than that of their competitors that had no raw materials of their own (Manke, 1971). Manufacturing firms that process primary products like minerals, and agricultural raw materials need this control so that they do not risk being thrown out of the market for not having adequate raw materials for their production (Howe, 1986).

Vertical integration has also been seen by certain authors as a means of **denying possible entrants** the chance to enter the industry with the hope that it leads to a form of monopoly. New entrants into an industry where most firms are integrated will be discouraged from doing so because they will need more financial and managerial resources to compete in such an industry. The firms already in the industry will have competitive advantages over potential entrants. Firms that integrate for this reason hope to gain more industry wide profits (Enderwick 1989).

In most countries, vertical integration for this reason is not possible because it restricted by the law. Those firms that want to integrate for the reasons of blocking competition cannot do so because distribution of one's own products is restricted.

Harrigan (1984) cites **better coordination** as a reason for vertical integration. Porter (1980) argues in favour of this reason for integration and he bases his belief upon the

assumption that a single organization can achieve coordination that may not be achieved by independent organizations: the administrative links of successive stages in the provision of goods and services will be cheaper, more reliable or convenient than that of independent units since the successive operations will be combined under one (roof) thereby eliminating and reducing certain costs. In such a case using an in-house supplier will make a schedule of production more efficient because there will be a firm commitment from a downstream manufacturing or distribution facility.

Better performance is one of the major factors that manufacturing firms consider before they go into vertical linkages. Performance is defined by the Oxford Dictionary as the organizations ability to achieve the goals it has set for itself. Results from the research on the performance of vertically integrated firms is not conclusive on whether vertically integrated firms perform better than those which are not. Rumelt (1974) and Lubatkin (1989) found different results.

While Rumelt found that vertical mergers were least successful as diversification strategies Lubatkin found out that vertical integration increased shareholder wealth. Another study by Buzzell (1983) on the relationship between the degree of vertical integration and profitability of a manufacturing firm found out that there was a relationship between vertical integration and product innovation. Highly integrated firms generated more new products, thereby facil-

itating the notion that vertical integration facilitates product innovation. He found out that profit levels expressed as a percentage of sales rose as the degree of vertical integration rose. For the same range of data, investment intensity rose with the degree of vertical integration. The Return on Investment as a result declined to a point where the degree of vertical integration fell between 50% and 60% and beyond that level investment intensity increased more slowly and consequently ROI increased. This gave a V-shaped relationship. The V-Shaped relationship between the degree of vertical integration and profitability showed that a very low or a very high level of investment yields an above average rate of return while earnings were lowest in the middle. The implication of this is that very high investment intensity may hurt ROI and so until the optimal point where investment rises slowly than profits, the returns may be low. A study by Sayan Chatterjee (1991) attempted to investigate the factors that explains gain resulting from vertical mergers. He found out that there are gains from vertical mergers, and these gains resulted from increased market power.

2.2 STUDIES ON VERTICAL LINKAGES IN KENYAN MANUFACTURING SECTOR

2.2.1 The structure of Kenya's manufacturing Sector

Kenya's manufacturing sector can be divided into the agro-based industries and the non agro-based industries. The agro-based industries include manufacturing firms in: meat and dairy products industries, canned vegetables and fruits, grain mill and bakeries; sugar, beverages and tobacco; paper and paper products; wood and cork products. The firms in the non agro-based industries include those manufacturing firms in the textiles and clothing; leather and footwear; petroleum and chemicals; plastics clay and glass; non metallic minerals; and metal industries.

2.2.2 Historical development of vertically linked firms in the Kenyan manufacturing sector

Most vertically linked agro-based manufacturing firms have their origins in the colonial era. These firms developed as part and parcel of the import substitution industrialization process that were designed in the development plans of that time. Professor Nyong'o in Ikiara (1988) traces the development of Kenyan manufacturing firms since the colonial times to the present.

The colonial policy before the World War II was that those parties that were interested in setting agriculture based manufacturing firms were to find land, break it, build infra-structures, plant the crops and process them before distributing them to the consumers (Ikiara, 1988). The firms that were developed were to produce goods that were formerly being imported to satisfy the needs of the colonialists. Such manufacturing firms were encouraged to produce goods preferably using the local primary raw materials. Before the second World War, a number of such firms were established in Kenya.

Table 2.21 shows a number of vertically linked firms that developed before World War II.

Table 2.21: Vertically integrated firms that developed before World War II

NAME OF COMPANY	PRODUCE	YEAR OF ESTABLISHMENT
Kenya Tea co.	Tea and coffee	1924
East African Breweries	Beer Production	1922
East African Tanning Extract Co.	Wattle Bark and Extract manufacturing	1932
East African Meat Co.	Meat Processing	-
Magadi Soda Co	Soda Extraction	1911
East African Power and Lighting	Power Generation in East Africa	1933
East African Portland cement Co.	Cement processing and clinker grinding	1933

Adapted from Coughlin P., and Ikiara G.,: Industrialization in Kenya - In search of a Strategy (Heineman, 1988, PP 13).

Most of the manufacturing firms that developed during this period were mainly owned and controlled by the local European and foreign firms. After independence, a number of vertically linked firms were established to meet the objec-

tives set in the Development plan of the era. Such objectives included enhanced growth, employment creation, foreign exchange conservation, domestic resource utilization and skill creation. These firms were established with the help of foreign investments and the Kenyan government. Most of the firms were subsidiaries of multinational corporations with few shares coming from the state. Table 2.22 gives a list of manufacturing firms established between 1957 and 1974.

Table 2.22: Vertically Linked firms that developed between 1957 and 1974

NAME OF CO.	PRODUCE	YEAR ESTABLISHED
Bata Shoe Co	Cycles and tyre tubes	1957
Firestone E.A. Ltd.	Motor Vehicle tyres	1969
E.A. Packaging Industries	Multiwall paper sacks	1963
General Motors (K) Ltd.	Motor vehicle assembly	1975
Rivatex	Textiles	1975
United Textile Mills	"	1962
Kisumu Textile Mills	"	1965
Pan African Paper Mills	Paper	1973

Adapted Coughlin P., and Ikiara G., Industrialization - In search of a strategy (Heineman 1988, PP 34).

Apart from the above mentioned manufacturing firms, several firms have developed in the industries where they never used to be. A number of vertically linked firms have developed in the textiles industry, and steel rolling and galvanizing industry. Most of the vertically linked firms that have survived are large firms that are in indus-

tries that were highly protected in the name of infant industries. These industries produced high cost goods for domestic markets and reaped high profits even when they had production inefficiency in the form of excess capacities.

2.2.3 The Role of Kenya's manufacturing Sector

Kenya's industrialization strategies are faced with a challenge of a population of nearly 40 million in the year 2000 (Coughlin, 1988). This population needs to be fed and employed. While agriculture provides employment for 80% of Kenya's rural population, it only contributes 30% of the GDP (1992 Kenya Econ Survey). This means that the manufacturing sector has to develop at a faster rate than it is doing presently to help meet this challenge.

The manufacturing sector has played a continued key role in the national development only second to the agricultural sector in its contribution towards the GDP. It currently employs 188,874 persons (1992 Kenya Economic Survey) and although there is a slump in the economic growth rate, some of the subsectors in the manufacturing sector has satisfactory growth rates. In the current development plan, the manufacturing sector is accorded second priority after agriculture and is considered to be one of the main engines for faster growth in the agricultural sector. The two sectors therefore have to work together to meet the

objectives of growth as set in the 1989/1993 Development Plan.

2.2.4 Vertical Linkages in the Agro-based Industries

The sugar Industry

There are five major sugar-cane manufacturing firms in Kenya namely Chemelil Sugar Company, East Africa Sugar Industries, Mumias Sugar Company, Nzoia Sugar Company and South Nyanza Sugar Company. The government owns between 75 percent and 100 per cent of the equity of each of the five main sugar factories (Kimurage, 1987). Table 2.23 indicates the sugar companies in Kenya and their mode of ownership.

Table 2.23: Sugar factories and their ownership in Kenya

NAME OF THE COMPANY	OWNERSHIP	
Chemelil Sugar Co.	ADC	97.0 %
E.A. Sugar Industries	ADC	74.2 %
Mumias Sugar Co.	GOK	82.8 %
Nzoia Sugar Co.	IDB	3.0 %
	GOK	93.3 %
South Nyanza Sugar Co.	GOK	91.3 %
	ICDC	5.1 %
	IDB	3.6 %

Adapted from: Schulter Michael.: Constraints on Kenya's food and Beverage exports. A report for World Bank, 1988 pp 8.

Most of these sugar factories are integrated to some extent. Coughlin P., et al. (1986) explains the form of integration in the sugar industry. The typical forms of integration in the sugar industry include the ownership of a nucleus estate and the processing of sugar. All the five factories directly own and operate nucleus sugar-cane estates that supply a significant portion of their cane needs. In most factory zones, the nucleus estates provide 30% of the total cane milled. The nucleus estates are supposed to act as demonstration and service centres for outgrowers. They also balance the company's flow of cane to the factories by augmenting the supply from the outgrowers, and

thereby provide a buffer against the risk of inadequate cane supplies to meet the requirements of sugar mills.

The factories take part in cane production and sugar milling. Cane production involves clearing, destumping, levelling, grading, ploughing, harrowing, furrowing, planting, weeding, harvesting, loading and transporting. The costs of these are set by Kenya Sugar Association and are deducted from the incomes of the sugar farmers. Sugar distribution is done by a government parastatal, the Kenya National Trading Corporation.

Tea Industry

In the tea industry, the manufacturing firms can be divided into two groups namely those owned by Kenya Tea Development Authority and those owned by Brooke Bond Group of companies.

Steeves (1975) explains the nature of integration in the tea industry. The nature of vertical linkages in the tea industry differs slightly from that of the sugar industry. Most of the tea leaves come from the company owned estates in the case of Brooke Bond group of companies. For the KTDA, most of the tea leaves come from the small scale growers of tea. Brooke Bond Group of companies own their tea estates, they process the tea and warehouse them before auctioning. They are fully integrated in all aspects of tea production from planting to the marketing stage. Brooke Bond own farms in Limuru and Kericho. Kenya Tea Development

Authority (KTDA) was established by the Kenya Government to promote tea growing among the Kenyan small holders so as to reduce monopoly in tea by a foreign companies (Coughlin P. et al, 1986). KTDA has over 54,000 hectares under tea with over 138,000 small holders and 79 tea factories scattered in the tea growing zones. The company owns only a small amount of company estates. KTDA is integrated in that it administers technical advice in the field, it provides credit, extension services, nurseries, transport, processing and marketing facilities.It also gives planting materials to control the quality of tea. It is in charge of planting programmes, field operations, inspections, collection, purchase, transportation and sale of green leaf to factories.

KTDA has integrated most aspects of tea operations within the organization.

Beer Industry

Kenya Breweries, the major brewery in Kenya has its headquarters in Nairobi with branches in Kisumu and Mombasa. Kenya Breweries was established in 1922. Kenya Breweries Brochure (1982) gives the nature of linkages in the firm to include growing of malting barley and the processing of beer. Kenya Breweries give financial and technical support to farmers that grow the barley. The barley zone is in Nakuru. The agricultural supervisors oversee barley farming, technical services division and they plan and super-

vise the brewing. KBL has also integrated backwards into bottle production for its plant (KBL brochure: 1982).

Tobacco Industry

In Kenya, there are two major tobacco manufacturing firms, namely the British American Tobacco Company Ltd. (BAT) and the Mastermind Tobacco Company.

BAT was started in Kenya in 1907 (Coughlin, 1988) while Mastermind was started in 1989 Vertical linkages in the tobacco industry take the form of intensively promoting the growing of tobacco by these firms. The two firms offer extension services and all the farm inputs, the costs of which are removed from the incomes of the tobacco farmers. The firms buy all the tobacco leaf from their contracted farmers, process the leaves into the desired product and distribute the cigarettes and the cigars.

other firms in the agro-based industries that are vertically linked

There are a number of firms in the agro-based industry that also possess certain forms of vertical linkages. The nature of the linkage is described in Table 2.24.

Table 2.24: Some agro-based firms with vertical linkages in the manufacturing Sector

FIRM	PRODUCE	LINKAGE
Kenya Meat Commission	meat	Processes red meat and depots and retail outlets
Unga Group of Companies	Grain mill products	Processes baking flour and owns its own bakeries
Kenya Canners (Del Monte)	Fruit Canning	grows and cans pinneapples
Pan African Paper Mills	Paper and Paper Products	grows softwood produces paper
East African Tanning Extract	Wood and Cork Products	Grows wattle trees and processes extracts

Source: Coughlin P., et al; Studies on Kenya Industries. Report for the World Bank.

2.2.5 Vertical Integration in the Non Agro-based manufacturing Sector

Vertical linkages are also to be found in the textiles and clothing industry, leather and footwear industry, petroleum and chemical industry, the metal industry and the non-metallic minerals industry. The degree of the linkages differ as to the industry, depending on the stage of the development of the industry among other factors.

The textile industry

Kenya has a number of textile firms which have invested in backward and forward linkages. Coughlin (1986) gives backward and forward linkages as one of the major requirements for a successful textile operation. The other requirements are technical capabilities, organization systems, skills and ancillary industries.

Textile production is basically in three industries: the agricultural or chemical stage, the textile processing stage and the garment manufacture stage. Diagram 1 explains what occurs at each stage.

Diagram 1: Stages of production in textiles

Agricultural or chemical stage	wool	cotton	viscose	polymer pellet
Textile processing stage	degreasing and ginning		filament extrusion, cutting & dying	spinning & Packning
Garment stage	cutting and sewing			

Adapted from Coughlin P: The gradual maturation of an Import substitution Industry - The textile industry in Kenya. A Report submitted to the World Bank,1986.

A number of textile firms integrate spinning with either weaving or knitting and/or garment manufacture. Coughlin (1986) in his study on the linkages of the textile firms came up with a number of firms that are vertically linked. These are given in table 2.25.

Table 2.25: Textile firms that are vertically integrated

NAME OF FIRM	YEAR STARTED	LINKAGE	LOCATION
Sunflag	1940s	IG	Nairobi
Nakuru Industries	1957	I	Nakuru
E.A. Garments	1959	IG	Mombasa
Midco	1960	IG	Mombasa
United Textile mills	1962	I	Thika
Rayon (Thika mills)	1964	I	Mombasa
Londra	1965	IG	Nakuru
KICOMI	1965	I	Kisumu
Kenknit	1966	IG	Eldoret
Raymonds	1969	IG	Eldoret
Jaydees	1974	I	Nairobi
Montex	1976	I	Nanyuki
Rivatex	1982	IG	Eldoret*
Bedi Investments	-	IG	Nakuru

Adapted from Coughlin P: The gradual Maturation of an Import Substitution Industry: The Textile Industry in Kenya. A report submitted to the World Bank, 1986.

I means that the textile firm integrates spinning with either weaving or knitting

G means that the firm also carries out garment manufacture

Steel and Steel Related industries

Investments in steel and steel related products in Kenya were first made in the 1940s. The investments were started in the nails manufacturing and expanded into wire products in the 1960s (Coughlin 1986).

The nature of operations in the steel industry involves melting the steel from the imported steel or local scrap metal, rolling the steel, drawing wire, and making wire products e.g. nails, fencing materials and bolts.

A number of steel industries are integrated in the sense that they are involved in more than one stage of production. This is given in table 2.26.

Table 2.26: Vertically linked steel manufacturing firms

NAME OF COMPANY	LOCATION	STEEL MELTERS	ROLLING MILLS	DRAWING WIRE	USING WIRE
Kenya Steel Co.	Mombasa	yes	yes	yes	yes
Emco Steel Works	Nairobi	Yes	yes		
Steel Fasteners	Kikuyu			yes	yes
City Engineers	Nairobi	yes	yes		
Nalin Works	Nairobi			yes	yes
Khetishi Dharamshi	Nairobi	yes	yes		
Iron Int. Company	Mombasa		yes	yes	yes
Wire Products	Nairobi		yes	yes	
Chuma Products	Mombasa			yes	yes
Steel Reinforcements	Kikuyu			yes	yes
Welrods	Nairobi			yes	yes
E.A. Oxygen	Nairobi			yes	yes
Welding Alloy	Nairobi			yes	yes
Steel Africa	Mombasa			yes	yes

Adapted from Coughlin P., et al, Studies on Kenyan Industries. A Report for the World Bank.

The Chemical and Allied Industries

The Chemical and Allied industries include those manufacturing firms that process fertilizers, cement, soda ash, diatomite, glass, wattle extract and flourspar (Reich,1967).

In Kenya, the firms in the cement business are East African Portland Cement in Athi River and Bamburi Portland Cement Company in Mombasa. The nature of vertical linkages in cement firms involve the ownership of limestone fields, the processing and the marketing of cement. East African Portland Cement owns coral fields in Mombasa and they also own associate firms like Portland Cement in Athi River, and the Kenya Cement Marketing Limited.

Soda ash mining is done by Magadi Soda Company, a subsidiary of Imperial Chemical Industries Ltd. (ICI). The company owns the deposits of soda ash and they mine it and process it. They have built a 91 mile private railway line to Magadi from the main Nairobi - Mombasa line to transport the soda ash. They also own warehouses for the soda both at the factory site and at the deep water jetty in Mombasa. The trona is mined from the surface of the lake basin, crushed and mixed with lake liquor and pumped to the nearby factory for processing (Reich, 1967).

2.2.6 The Manufacturing firms with potential for vertical Linkages

The Electrical Cable Industry

The main firms in the electrical cable manufacturing are the ones listed in table 2.27.

Table 2.27.: Electrical Cable firms with high potential for backward linkages

NAME OF THE COMPANY	DATE STARTED	LOCATION
East African Cables (a subsidiary of Delta Cables, U.K.)	1965	Nairobi
Kenwestfall Works Ltd. (partially owned by IDB)	1979	Nairobi
Kenya Cables	1980	Kisumu
Coast Cables	-	Mombasa

Adapted from Coughlin P., et al. Studies on Kenyan Industries. A Report for the World Bank.

The major raw materials for the cable industry are copper, alluminium wire rods, steel armory wire and varnishers. The raw materials for the cable firms are imported. Kenwestfall and East African Cables have the capacity to make wire rods from scraps and imported alluminium or copper. This can save them 30% in foreign exchange.

Vehicle Assembly Industry

The major vehicle assembly firms are the ones listed in table 2.28 below.

Table 2.28.: Vehicle Assemblers with potential for vertical linkages

NAME OF THE COMPANY	OWNERSHIP	LOCATION
Fiat (K) Ltd	14% Fiat Italy 86% Private Kenyan and foreign	Nairobi
General Motors	51% ICDC 49% General Motors	Nairobi
Leyland Motors (K) Ltd.	35% Kenya Govt 45% Leyland (U.K) 20% CMC(K) Ltd.	Thika
AVA Ltd.	25% IDB 24.5% Lohnrho 24.5% Inchappe	Mombasa
Ziba Mgt & Services Ltd.	50% Kenya owned 50% H&Z Co.	Nairobi

Adapted from Murage (1983).: The Vehicle Assembly Industry in Kenya - An economic evaluation. An unpublished M.A. Research paper, Economic Department, University of Nairobi.

Most vehicle assemblers have the potential to integrate backwards into component production but they do not. The reason has been given by Coughlin 1985b:98) as being the frequent changes in models and makes of vehicles, making retooling for very short production runs expensive. He argues that if the government can control the number of models and makes of vehicles, backward linkages into component production will be feasible.

Various problems exist in the Kenyan manufacturing sector, some relevant to vertically integrated firms. A research project in 1984 by a team of lecturers at the University of Nairobi on Kenya's industrialization found out the following among other things.

*that manufacturing firms employ individuals with questionable managerial capabilities
*there exists obsolete or inappropriate machinery in the country.
*there is lack of effective co-ordination of activities among certain organs of the government.
*that failure to select top quality managers in government controlled firms contribute to failure of these firms.

The group recommended among other things that

*industry need to develop strong linkages with agriculture by processing agricultural outputs and providing inputs for agriculture and agro-industries.

It has been argued that competition in the manufacturing sector and the need to control the sources of raw materials

affects the choice of a strategy. This can be seen in the case of Magadi Soda Company Ltd. The company was established so as to serve the needs of a British Industrial firm "by expansion into a producing area in order to control the source of soda ash so as to keep this soda deposit out of the hands of the competitors". In the tea, sugar and fruit canning industry, the concept of control was different. The government set up KTDA so as to take away the control of foreign firms over tea monopoly, while Delmonte started their own pineapple plantations to have control over the sources of their raw materials.

For the state owned manufacturing firms, the government apppoints the board of directors who in turn appoint the middle management teams. The government also controls the associated bodies of these firms, e.g. Kenya Sugar Authority, Kenya Tea Board, Kenya National Trading Corporation and so on. The management teams in such firms know that the government support their operations and may continue to do so even when they are unable to meet their debt obligations. An example is Kenya Meat Commission which was bailed out by the government even when it had become bankrupt. This implies that certain parastatals, although linked and suffer from the effects of the choice of a wrong strategy, continue to operate.

One of the major problems of integrating various stages of production is capacity utilization. One of the major problems in the Kenyan manufacturing firms is the

presence of excess capacities. Non of the three factories in Nyanza Sugar Belt has ever operated at full capacity in any one year since they were established (Odhiambo, 1978). The full capacity ratings of the three factories is 60,000 tonnes per annum between 1967-1976 period. For the same period, only 50% of the plants were utilized. Other manufacturing firms that suffer from excess capacity are found in the Meat and Dairy Industry. Most of the vertically integrated firms suffering from excess capacity are the government owned agro-based industries and the government owned textile and steel firms. Those firms that were surveyed in 1984 indicated that the steel pipe manufacturers were running at 13%, steel rollers at 22%, steel manufacturers at 48%, cold rolling at 21% and sheet galvanizers at 62% (Coughlin, 1886). The effect of excess capacity in the manufacturing sector is to pose several problems. It leads to low outputs and this defeats Kenya's self sufficiency policy and results in a continuous reliance imports that depletes foreign exchange reserves. Excess capacity also leads to high costs of production and low exploitation of economies of scale. The excess capacity observed among the government owned manufacturing firms has been attributed to government protection accorded to these firms.

Capital investment has been considered to be a major factor influencing vertical integration strategy. Vertical integration require alot of very high capital investments

and is therefore out of reach of many private individuals. For example, to enter sugar production, a new firm needs a total of KM17 million for a normal factory producing 60,000 tonnes of sugar per year (Kimurage, 1987). An integrated body like KTDA was funded by Commonwealth Development Corporation (CDC), the World Bank, West German Government, OPEC and the Kenya Government, to raise a total finance of KSHS 538 Million (Tea Times, 1990).

The other factors mentioned in the literature review are at best theoretical considerations and it would be interesting to know whether they affect managers' decisions in integrating vertically.

From the above literature review, it can be concluded that various Kenyan manufacturing firms exhibit some levels of vertical linkages, both in the agro-based industry and the non agro based industries.

CHAPTER 3

RESEARCH DESIGN

INTRODUCTION

This chapter presents the research design that has been used in order to meet the objectives of the study as set out in chapter 1. The study was exploratory in nature and therefore no hypotheses were tested.

3.1 DATA COLLECTION METHOD

Primary data was used in the study. It was was collected from the top managers of the organizations. It was felt that the general managers and/or the managing directors might provide the required information because they are amongst the policy makers in these organizations. Since they make corporate decisions, they are likely to know the factors that influence their choice of vertical integration strategy.

3.2 RESEARCH INSTRUMENT

A questionnaire was used (see appendix 7) to gather the primary data from the managers of various companies. The questionnaires were either hand delivered by the researcher to the offices of these managers (for those with offices in Nairobi), or sent by post in the case of those with offices outside Nairobi. A return self-addressed envelope was enclosed with the questionnaire that was sent by the post.

Follow-up telephone calls were made since most of these managers required constant reminder before they could complete the questionnaires. In most cases, the researcher had to explain how certain factors could affect them before they could make up their mind. Most questionnaires were filled in the presence of the researcher on appointment.

3.3 POPULATION OF STUDY

The population of the study consisted of all vertically integrated manufacturing firms in Kenya. The list of these firms was obtained from The Kenya Trade and Business Directory (1992). This is the latest copy available. A census approach was preferred. That is, all the 52 vertically integrated firms were used. This because it was expected that not all the firms would cooperate in answering the questions. These firms belonged to a cross-section of all the sub-sectors of the Manufacturing Sector. It was expected that they would give appropriate information about the study. The list of the vertically integrated firms is in appendix 1.

3.4 DATA ANALYSIS

Data was analysed using percentages, frequency tables and factor analysis. The frequency tables and percentages were used to present the ratings of various items by the respondents as well as their opinions. Factor analysis was used to reduce a set of the variables used to a smaller set of highly independent factors. This was done so that a few

basic factors that explain the interrelationships among a large number of variables could be selected.

CHAPTER 4

DATA ANALYSIS

4.1 Use of Vertical Integration strategy by Kenyan manufacturing firms

The study was designed to find out, among other things whether forward integration existed among the manufacturing firms in Kenya. All the manufacturing firms processing primary raw materials were found to have some form of forward linkages. In the mining industry, all the firms studied distributed their own finished products either through a department of the company or through associate company. In the agro-based manufacturing firms, 67% of the firms in this sub-sector distributed their own finished products while the rest distributed through appointed dealers and through government agencies. All the firms in the agro-based and mining industry had their own warehouses. All the firms studied had backward linkages. The agro-based firms were all involved in crop production, transportation of the finished products to the factories and processing. All the mining firms owned their mineral fields, the steel firms had linkages in the production of the needed steel from scrap metals and the textile firms were integrated into either spinning or weaving, or garment manufacture.

4.2: Distribution of firms by Industry, Age, Size and Ownership

Table 4.21 Distribution of firms by industry

I N D U S T R Y	FREQUENCY	PERCENTAGE
1. Agro-based	17	55%
2. Textile firms	5	16
3. mining	4	13
4. Steel manufacturers	5	16
T O T A L	31	100

The table above indicates that most of the vertically integrated firms are in the agro-based industries, followed by the textile, steel manufacture and mining firms.

Table 4.22. Distribution of firms by Age

Y E A R S	FREQUENCY	PERCENTAGE
1. Less than 10 years	3	9.7
2. More than 10 years but less than 20 years	8	25.8
3. More than 20 years	20	64.5
TOTAL	31	100.00

According to data in Table 4.22, most vertically integrated firms have been in existence for over 20 years.

Table 4.23 Distribution of the firms on the basis of Ownership

OWNERSHIP	FREQUENCY	PERCENTAGE
1. Full government ownership	5	16
2. Government & foreign owned	18	58
3. Privately owned	8	26
TOTAL	31	100

As evident in Table 4.23 shows that most vertically integrated firms are joint ownerships between the government and foreign firms.

Table 2.24. Size of the firms.

NUMBER OF EMPLOYEES	FREQUENCY	PERCENTAGE
1. Below 500	3	10
2. More than 500 but less than 1000	10	32
3. More than 1000	18	58
TOTAL	31	100

As evident in Table 4.24, most of the vertically integrated firms have many employees and are therefore large firms.

4.3 The Relative Importance of different factors in the decision to integrate Vertically

The respondents were required to rate the importance they attach to different factors that are said to influence the decision to adopt vertical integration strategy on a five point Likert-type ranging from most important to totally unimportant. Certain factors emerged as important and non of the respondents rated any factor as unimportant.

The factors rated as important by all the respondents in the manufacturing sector have been summarised using frequencies and percentages and given in Table 4.31

Table 4.31:
Factors rated as important by all the firms in the manufacturing sector

FACTORS	RATINGS 1	2	3	TOTAL
1. Need for greater control over the firm's economic resources	58	23	19	100
2. Certainty of demand	20	65	16	100
3. Competent managers	52	25	23	100
4. Corporate mission	22	58	19	100
5. Adequate manufacturing facilities	74	10	16	100
6. Investment Costs	52	32	16	100

Table 4.31 shows that the availability of adequate manufacturing facilities seems to be the most important factor for vertically integrated firms, followed by the need for greater control over the firm's economic resources, competent managers and investment costs in that order.

4.4 THE RELATIVE IMPORTANCE OF THE FACTORS: ANALYSIS BY INDUSTRY

All the firms were grouped by industry into the agro-based industry, mining, steel and textiles. The factors were analysed for each industry.

The agro-based industry

There was a general agreement among the managers of the agro-based manufacturing firms about certain factors being important. These are given in Table 4.31.

Table 4.41 Factors rated as important by managers in the agro-based manufacturing firms

FACTORS	RATINGS 1	2	3	TOTAL
1. Need to control the firm's economic resource	65	18	17	100
2. Needto build new infra-structures	70	23	-	93
3. Certainty of demand	29	41	29	99
4. Availability of adequate manufacturing facilities	70	11	17	98
5. Competent managers	65	11	11	87
6. Economies of scale	59	23	18	100
7. Size of the business	-	47	35	82
8. Corporate mission	23	47	29	99
9. Investment costs	29	53	11	93
10. Need to manage the firm's raw materials	60	23	17	100

In the opinion of the managers, the need to build new infra-structures, the need to control the firm's economic resources, the need to manage the firm's own sources of raw materials are very important factors.

The need to build new infra-structures is an important consideration in the agro-based manufacturing firms. The agro-based firms which started operating during the colonial era and the post independence era were influenced by the government policies of this era. The firm's had to buy land, develop the land, process the raw materials and distribute the finished products. Firms in the tea, sugar, coffee and even fruit canning built rural access roads and other infra-structural facilities to cater for

their employees. This factor was therefore an important consideration in creating backward and forward linkages.

The need to manage the firm's sources of raw materials was rated highly by the firm's in this category. Most of the firms indicated that they did not want to risk running out of raw material supplies.

The need for economies of scale is an important factor for the agro-based manufacturing firms. All of the firms rated this factor as important. Economies of scale in the agro-based industries arises from using the same processing facilities for different brands of products, using the same transport vehicle, buying in bulk, using the same warehouses for raw materials and finished products, using the same rural access roads, processing in bulk and so on.

82% of the firms in this industry considered the size of the firm as important while only 50% of the firms in all other industries considered the size of the firms as important. A possible reason for this is that the output of the firms in the agro-based industry depends, among other things, on the size of the plantations which in turn influences the size of the processing facilities, warehouses, and distribution channels.

Investment costs were considered as important by 93% of the firms in this sub-sector. Investment costs influence the decision of the firms to expand the business. A firm with plenty of funds can afford to go into vertical linkages. This explains the reason why most vertically integrated firms are either funded by the government or foreign

companies or both.

The availability of competent managers was considered important by 87% of the firms. This factor should therefore be borne in mind by all firms that are vertically integrated (whether they are state firms or foreign owned) when choosing the management of vertically integrated firms.

The rest of the factors such as synergy, need to protect superior knowledge over the firms products, need to explain to the consumers how to use the products, the need for technological leadership were either rated as unimportant, or totally unimportant (See appendix 2). A likely reason for this is that the firms in the agro-based industries have very few innovations (if any) in their products and technologies they use.

Steel Industry

In the steel manufacturing firms, the need for high market share, need for improved co-ordination, need for greater control over the firm's economic resources, the need for synergies, certainty of demand, adequate manufacturing facilities, competent managers, economies of scale, the level of competition in the industry, corporate mission and investment costs emerged as important. The ratings are given in the Table 4.32

Table 4.42:
Factors rated as important by managers of steel firms and their relative importance

FACTORS	RATINGS 1	2	3	TOTAL
1. Need for high market share	50	25	25	100
2. Need for improved coordination	25	75	-	100
3. Need for greater control over the firm's economic resources	50	25	25	100
4. Need to protect the superior knowledge of the firm's products	75	-	25	100
5. Economies of scale	75	25	-	100
6. Need for synergies	50	-	50	100
7. Certainty of demand	-	100	-	100
8. Adequate manufacturing facilities	50	25	25	100
9. Level of competition in the industry	100	-	-	100
10. Corporate mission	25	75	-	100
11. Investment costs	50	50	-	100

The need for high market share and the level of competition are related in the sense that a firm which needs high market share need to out-perform its competitors. Protection by the government is low in this industry and this means that the barriers to entry are low, thereby allowing many firms to enter and operate in the industry.

The need for synergies and economies of scale were rated as important by the managers of these firms. The synergies and economies of scale both arise from the use of shared facilities in manufacturing.

The need for co-ordinating the various stages of production was rated as important. This factor is therefore an important consideration. The factors which were rated as

unimportant or totally unimportant by the managers of steel manufacturing firms include the need for improved marketing, need to build new infra-structures, and the need to explain to the consumers how to use the products.

The textile firms

The textile firms found the following factors important: the need for high market share, the need for greater control over the firm's economic resources, need to gain economies of scale, corporate mission, investment costs, need to protect superior knowledge of the firm's products, need for synergies, adequate manufacturing facilities and the level of competition in the industry.

The mining Sector

The mining sector considered the following factors as important:

* The need to control the firm's economic resources.
* The need to build new infra-structures
* Certainty of demand
* Availability of adequate manufacturing facilities
* Competent managers
* Economies of scale
* Size of the business
* Investment costs
* Need to manage own sources of raw materials
* Corporate mission (see appendix 5)

4.5 The other important factors in the firm's decisions to integrate

Many firms did not indicate any other factors that may influence their decision to integrate either backwards or forwards. The firms which indicated the other factors, gave better performance, need for intensive research and develop-

ment, the need for economies of scale in administration, environmental concern, foreign or local control, managerial experience and expansion needs. Better performance was indicated as an important consideration in deciding to have vertical linkages. A firm in the agro-based manufacturing firms indicated that their performance in terms of profitability is due to the vertical linkages they have.

Foreign or local control was ranked important by certain firms. A possible reason for this is that foreign controlled firms do not face financial difficulties as regularly as the local controlled firms.

The government policy was considered important. Protection by the government is accorded the government owned firms and the foreign owned firms. This may make the private owned firms feel that government policy may influence the decision to have vertical linkages.

Management experience and expansion needs were rated as important. If managers are experienced and other factors for integration are favourable, then vertical expansion is justified for a firm.

4.6 FACTOR ANALYSIS

The same data for all the firms was analysed using factor analysis to find out which factors would emerge as very important for vertical integration decision. Factor analysis is used to group variables for simplification purposes so that only a few are used in the study. It also uncovers the underlying structure in the data. The main assumption is that may variables are manifestations of a smaller number of

variables. The factors in table 4.61 were the ones given in the questionnaire.

Table 4.61:
Factors given in the questionnaire

1. Need for high market share
2. Need for improved coordination
3. Need for greater control over the firm's economic resources
4. Need for improved marketing
5. Need to protect superior knowledge of our products
6. Need to maintain technological leadership
7. Need to explain to the consumers how to use our products
8. Need to build new infra-structures
9. Need to gain more in profits from working as a single unit
10. Certainty of demand for our products
11. Availability of adequate manufacturing facilities
12. Availability of competent managers
13. Need to manage our own raw materials
14. Need to gain economies of scale in marketing, distribution etc.
15. Size of the business
16. Level of competition in the in industry
17. Corporate mission
18. Investment Costs
19. Stability of future costs

Since the computer package could only carry 18 by 18 matrix, one factor had to be removed from the 19 factors given. The criteria used was the one of the factors which had the highest standard deviation. Factor 13 (need to manage our own sources of raw materials) with a standard deviation of 1.45 was removed (as this implied that the responses for the question was not consistent) and 18 factors were therefore used. Table 4.62 shows the factors that were used.

Table 4.62 FACTORS CHOSEN FROM THE QUESTIONNAIRE

1. Need for high market share
2. Need for improved coordination
3. Need for greater control over the firm's economic resources
4. Need for improved marketing
5. Need to protect the superior knowledge of our products
6. Need to maintain technological leadership
7. Need to explain to the consumers how to use our products
8. Need to build new infra-structures
9. Need to gain more in profits from working as a single unit
10. Certainty of demand for our products
11. Availability of adequate manufacturing facilities
12. Availability of competent managers
14. Need to gain economies of scale in marketing, distribution
15. Level of competition in the industry
16. Corporate Mission
17. Investment cost
18. Stability of future costs

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Table 4.63 The summary statistics of the factors listed in the questionnaire

FACTOR AVERAGE	SAMPLE	MODE	STD.DEVIATION
1.	1.67	1	0.98
2.	1.71	1	0.74
3.	1.74	1	1.06
4.	2.19	2	1.08
5.	2.84	4	1.03
6.	2.68	4	1.20
7.	3.74	4	1.03
8.	2.97	4	1.33
9.	2.07	2	0.96
10.	2.29	2	1.24
11.	1.52	1	0.93
12.	1.48	1	0.96
14.	2.23	1	1.45
15.	2.16	2	1.10
16.	2.94	4	1.12
17.	3.03	2	1.11
18.	1.55	1	0.77
19.	2.45	2	1.30

Factors 1,2,3,11,12,14 and 18 had the highest number of respondents rating them as very important. This can be seen in their sample averages which is below 2 and the mode which is 1.

The following factors were rated as very important by the highest number of firms.

* Need for high market share
* Need for greater control over the firm's economic resources
* Availability of competent managers
* Need to manage the firm's own raw materials
* Availability of adequate manufacturing facilities
* Need to gain economies of scale in marketing, distribution etc
* Stability of future costs

On the average, only four factors were highly rated by a manufacturing firms as unimportant. These factors were:

* Need to protect the superior knowledge of the firm's products
* Need to maintain technological leadership
* Need to explain to the consumers how to use the products of the firm
* Size of the firms

The rest of the factors were rated as either important or fairly important. The analysis by industry using percentages and frequencies indicated that some of the factors rated as unimportant by certain industries are important for others.

Table 4.64
FACTOR ANALYSIS OF VARIABLE (FACTOR) AND COMMUNALITY

VARIABLE (FACTOR)	COMMUNALITY
1. Need for high market share	0.78
2. Need for improved Coordination	0.73
3. Need for greater control over the firm's economic resources	0.70
4. Need for improved marketing	0.69
5. Need to protect the superior knowledge of the firm's products	0.79
6. Need to maintain technological leadership	0.91
7. Need to explain to the consumers how to use the firm's products	0.72
8. Need to build new infra-structure	0.76
9. Need for synergies	0.67
10. Certainty of demand for the firm's products	0.78
11. Availability of adequate manufacturing facilities	0.88
12. Availability of competent managers	0.88
14. Need to gain economies of scale	0.68
15. size of the business	0.84
16. Level of competition in the industry	0.75
17. Corporate mission	0.68
18. Investment costs	0.75
19. stability of future costs	0.72

A communality is a measure of the amount of the variable's variance that is explained by the extracted factors. The higher the variable's communality, the more it is explained by the common factors rather than any unique factor (Shrivastava, 1983). As the factor loadings are very high on factor 6, it reveals that all variables are clubbed on factor 6.

Table 4.65

EIGEN VALUES

FACTOR	EIGEN VALUE	%VARIABLE	CUM%
1.	3.70	20.50	20.50
2.	2.69	14.90	35.5
3.	1.94	10.8	46.3
4.	1.68	9.4	55.6
5.	1.48	8.2	63.8
6.	1.17	6.5	70.3
7.	1.02	5.7	76.0
8.	0.86	4.8	80.8
9.	0.80	4.5	85.2
10.	0.61	3.4	88.6
11.	0.52	2.9	91.5
12.	0.42	2.3	93.8
13.	0.38	2.1	96.0
14.	0.24	1.3	97.3
15.	0.21	1.2	98.5
16.	0.12	0.7	99.1
17.	0.09	0.5	99.6
18.	0.06	0.4	100.0

The Eigen values is the average of the squares in the column of the principal component analysis. This average represents the per cent of variation for the 18 variables that is accounted for in the first factor. Factor 1 explains 20.5% variability, factor 2 explains 10.8% variability and so on. Since the researcher felt that more than one factor influences the decision to vertically integrate, a varimax rotation was carried out. Those factors with Eigen values of over 1 were chosen to be the basic factors for the varimax rotation. The results have been given in Table 4.66.

Table 4.66 VARIMAX ROTATED FACTOR MATRIX

VAR	1	2	3	4	5	6	7
1.	-0.01	0.85	0.06	-0.05	0.15	0.11	-0.09
2.	0.04	-0.15	0.15	0.12	-0.08	-0.10	0.80
3.	-0.18	0.16	-0.15	0.77	-0.08	-0.04	-0.12
4.	-0.07	0.76	-0.04	0.25	-0.34	0.16	-0.12
5.	0.02	0.55	0.37	-0.07	0.17	0.26	0.46
6.	-0.06	0.34	0.05	-0.15	0.01	0.86	0.17
7.	-0.13	0.03	0.08	0.07	0.09	0.74	-0.36
8.	0.25	-0.04	0.09	0.79	0.18	-0.00	0.19
9.	0.11	0.05	0.06	0.25	0.76	0.00	0.19
10.	0.62	0.24	0.46	0.15	0.10	-0.23	-0.13
11.	0.92	-0.01	-0.04	-0.03	-0.08	0.06	0.07
12.	0.89	0.24	0.04	0.05	0.09	0.10	-0.02
14.	0.05	0.44	0.19	0.44	0.46	-0.14	-0.08
15.	0.02	-0.03	0.86	0.03	-0.00	0.26	-0.13
16.	0.00	0.33	0.65	-0.30	0.23	-0.24	0.05
17.	0.47	-0.03	0.39	0.18	0.51	0.01	-0.07
18.	0.57	0.37	-0.41	-0.22	0.17	-0.06	0.14
19.	-0.07	0.13	-0.04	-0.32	0.75	0.13	0.00

Table 4.66 indicates Factors 1, 2, 3, 4, 5, 6 and 7 in the final rotated varimax explained the maximum percentage variance. Each factor is constituted of all the variables that have factor loadings greater than or equal to 0.5. The variables 10, 11, 12, and 18 are heavily loaded on Factor 1; 1, 4, 5 are heavily loaded on factor 2; 15 and 16 are heavily loaded on factor 3; 3 and 8 are heavily loaded on factor 4; 9, 17 and 19 are heavily loaded on factor 6; 6 and 7 are heavily loaded on factor 6; and 2 is heavily loaded on factor 7.

From the final varimax rotated factor matrix (Table 4.66) the following factors emerged as important in their order they are given:

* Availability of adequate manufacturing facilities.
* Availability of competent managers
* Size of the business
* Need for improved marketing
* Need for high market share
* Need for improved coordination
* Need to build new infra-structures
* Need to gain more in profits by working as a single unit
* Stability of future costs

The factors listed above are important for all the firms irrespective of the industries where they are found. Since different factors emerge as important for different industries, industry analysis would be used for conclusions.

Table 4.67 Identification of the factors

FACTOR NAME	VARIABLES
FACTORS OF PRODUCTION FOR ALL THE MANUFACTURING FIRMS	* The need for high market share * Certainty of demand for the firm's products * Availability of adequate manufacturing facilities * Availability of competent managers
FACTORS RELEVANT TO THE TEXTILE AND STEEL MANUFACTURERS	* Need for improved co-ordination of the firm's activities * Need for improved marketing of the firm's products * Need to protect superior knowledge of the firm's products * Need for synergy * Need for greater control over the firm's economic resources * Size of the business * Level of competition in the industry * Corporate mission * Stability of future costs
FACTORS RELEVANT TO THE AGRO-BASED & MINING FIRMS	* Need for greater control over the firm's economic resources * Size of the business * Level of competition in the industry * Need to build new infra-structures
FACTORS FOUND UNIMPORTANT BY MOST OF THE FIRMS	* Need to gain technological leadership * Need to explain to the consumers how to use the firm's products

CHAPTER 5

DISCUSSION AND CONCLUSIONS

Corporate managers consider various factors to be important in their decision to have vertical linkages. All the factors were given different ratings by corporate managers. The need for high market share, certainty of demand for the firm's products, availability of adequate manufacturing facilities and the availability of competent managers were factors identified both in the final rotated varimax and analysis by percentages as factors important for all manufacturing firms. The need for high market share is an important consideration in vertical integration strategy since a low market share may mean that a firm with a large amount of its own raw materials and finished goods not be able to dispose them off. Firms with high market share are more certain of the demand for their products than firms without. Such firms are therefore able to sell their goods even if the market conditions are poor.

Adequate manufacturing facilities is a factor which should be considered by all firms that require to form vertical linkages. Inadequate attention to this factor may mean that a firm will operate at either excess capacity because it cannot supply all its raw materials or overcapacity because the machineries cannot meet the demand of the available raw materials.

The availability of competent managers is an impor-

tant factor and therefore all the firms should make sure that their management is qualified. If a firm has competent managers, then co-ordination of various linked units may not prove a difficult task.

The need for greater control over the firm's economic resources, size of business, level of competition in the industry and the need to build new infra-structures were factors identified together with the factors for all the manufacturing firms as important for the firms in the agro-based and mining firms.

The need for greater control over the firm's economic resources is an important consideration for all the firms studied. The firm's economic resources in this case include the raw materials, the processing facilities, the distribution channels, and the transportation facilities.

Size of a firm is an important consideration in its decision to have vertical linkages. For the agro-based and mining firms, a large size means the firm can enjoy economies of scale in manufacturing, marketing, transportation, distribution and warehousing. Such economies of scale may make it reduce certain costs and thereby enjoy more profits from its operations.

The level of competition in the agro-based and mining industry is an important consideration in integrating the supply of raw materials, production and distribution. Those firms operating in sectors where the level of competition for raw materials is very high, for example, in the tobacco and fruit canning industry, need to integrate raw material

production with processing so that they do not face shortages.

The factors which emerged as important for both the textile and steel manufacturers were the need for improved co-ordination, need for greater control over the firm's economic resources, need for improved marketing, need to protect the superior knowledge over the firm's products, need for synergies, size of the business, level of competition in the industry, corporate mission and stability of future costs.

Both the steel and textile manufactures who are vertically linked into spinning, weaving and/or garment manufacture operate in a number of stages which can easily be co-ordinated into few operations if the firm is linked. This factor is related to the need for synergies. The synergies arise from the shared facilities and may lead to higher returns since economies of scale in manufacturing is realised. These factors are therefore important.

The need to protect superior knowledge of the firm's products is important for both the steel and textile manufactures but more so for the latter. This arises from the fact that the latter operates in an environment of frequent changes in technologies and therefore need to protect the knowledge of their products lest these fall in the competitor's hands.

The level of competition in the steel and textile manufacture is an important consideration. Too much competition implies that future sales is unstable because firms may use cut-throat tactics in order to throw their competi-

tors out of operations. These are therefore important considerations.

The need for improved marketing (distribution, advertising, and pricing), is an important consideration for the textile firms and the steel manufacturers. This is because those firms that integrate into owning their wholesale stores gain from some economies of scale in supplying the customers at lower prices and thereby gaining more market shares.

These and various other factors discussed in the previous section are important considerations because even if they are not important from one industry's point of view, they affect other industries. The other factors which were rated as unimportant may be important for certain industries which may not have been included in the sample.

Limitations of the study

The study suffers from a number of limitations. First, not all the firms agreed to participate in the study. Very few firms from the textile and steel manufacture participated. The content of the results would have been richer had all the firms in the sample participated.

The government owned companies (parastatals) found the information sensitive and therefore never participated fully and this factor made it impossible to get concrete results for the parastatals.

There was a general lack of understanding of what the term vertical integration is. Although the researcher explained the term as best as she could the respondents

found it difficult to understand and this could have marred the results from the firms that completed the questionnaire on their own (i.e. without discussion and elaboration by the researcher).

Resource constraints were a major limitation of the study. Most of the firms with linkages into primary production are outside Nairobi. These areas could not be visited and the answers in the mail questionnaires were taken the way they were given.

Suggestions for further research

There are many issues that remain unresolved in this study. Research is needed to find out whether vertically integrated firms perform better than those firms that are not. Also, another study can be designed to investigate the effect of each of the factor on the performance of vertically integrated firms.

Appendix 1

VERTICALLY INTEGRATED MANUFACTURING FIRMS USED IN THE SAMPLE

1. Chemelil Sugar company.
2. East African Sugar Industries
3. Mumias Sugar Company
4. Nzoia Sugar Company
5. South Nyanza Sugar Company
6. Kenya Breweries
7. British American Tobacco Company
8. Kenya Meat Commission
9. Kenya Co-operative Creameries
10. Kenya Canners (Delmonte)
11. Mastermind Tobacco Company
12. Kenya Meat Commission
13. Pan African Paper Mills
14. East African Tanning Extract
15. Sunflag Industries
16. Nakuru Industries
17. East African Garments
18. Midco
19. United Textile Mills
20. Rayon (Thika Mills)
21. Londra
22. KICOMI
23. KenKnit
24. Raymonds
25. Jaydees
26. Montex
27. Rivatex
28. Bedi Investments
29. Kenya Steel Company
30. Emco Steel Company
31. City Engineers
32. Steel Fasteners
33. Nalin Works
34. Khetishi Dharamshi
35. Iron International Company
36. Wire Products
37. Chuma Products
38. Steel Reinforcements
39. Welrods
40. East Africa Oxygen
41. Steel Africa
42. Bamburi Portland Cement Co. Ltd
43. Magadi Soda Company Ltd.
44. Kenya Power and Lighting Co.
45. Kenya Flourspar Company
46. Bata Shoe Company
47. E.A. Bag and Cordage
48. Kenya Orchards
49. Pan African Vegetables
50. East African Sugar Industries
51. Brooke Bond
52. Unga Group of Companies

Appendix 2

Factors rated as important by the managers of the textile manufacturers

FACTORS GIVEN	RATINGS BY MANAGERS 1	2	3	4	5	TOTAL
1. Need for high market share	19	4	4	2	2	31
2. Need for improved co-ordination	12	13	4	2	-	31
3. Need for greater control over the firm's economic resources	18	7	6	-	-	31
4. Need for improved marketing	11	12	3	5	-	31
5. Need to protect the superior knowledge of the firm's products						
6. Need to maintain technological leadership	7	9	6	7	2	31
7. Need to explain to the consumers how to use our products	2	4	3	15	7	31
8. Need to build new infra structure	8	6	4	12	1	31
9. Need for synergies	10	10	6	4	1	31
10. Certainty of demand	6	20	5	-	-	31
11. Availability of adequate manufacturing facilities	23	3	5	-	-	31
12. Availability of competent managers	16	8	7	-	-	31
13. Need to manage the firm's sources of raw materials	13	4	1	8	5	31
14. Need to gain Economies of scale in marketing and distribution	9	11	6	3	2	31
15. Size of business	2	10	2	8	9	31
16. Level of competition in the industry	2	11	7	6	5	31
17. Corporate mission	7	18	6	-	-	31
18. Investment costs	16	10	5	-	-	31
19. Stability of future costs	9	10	2	6	4	31

Appendix 3

Factors rated as important by the managers of the agro- based industries

FACTORS GIVEN	RATINGS BY MANAGERS 1	2	3	TOTAL
1. Need for high market share	4	2	3	10
2. Need for improved co-ordination	6	6	-	12
3. Need for greater control over the firm's economic resources	11	3	3	17
4. Need for improved marketing	12	3	1	16
5. Need to protect the superior knowledge of the firm's products	2	4	5	11
6. Need to maintain technological leadership	-	2	-	2
7. Need to explain to the consumers how to use our products	-	-	2	2
8. Need to build new infra structure	12	4	-	16
9. Need for synergies	-	-	1	1
10. Certainty of demand	5	7	5	17
11. Availability of adequate manufacturing facilities	12	2	3	17
12. Availability of competent managers	11	2	2	15
13. Need to manage the firm's sources of raw materials	10	4	3	17
14. Need to gain Economies of scale in marketing and distribution	3	8	-	11
15. Size of business	-	8	6	14
16. Level of competition in the industry	4	5	2	11
17. Corporate mission	4	8	5	17
18. Investment costs	5	9	2	17
19. Stability of future costs	5	2	3	10

Appendix 4

Factors rated as important by the managers of the mining firms

FACTORS GIVEN	RATINGS BY MANAGERS 1	2	3	TOTAL
1. Need for high market share	2	-	-	2
2. Need for improved co-ordination	1	-	-	1
3. Need for greater control over the firm's economic resources	1	1	1	3
4. Need for improved marketing	2	-	-	2
5. Need to protect the superior knowledge of the firm's products	-	-	-	-
6. Need to maintain technological leadership	-	-	1	1
7. Need to explain to the consumers how to use our products	-	-	-	-
8. Need to build new infra structure	3	-	-	3
9. Need for synergies	-	-	1	1
10. Certainty of demand	-	3	-	3
11. Availability of adequate manufacturing facilities	2	1	-	3
12. Availability of competent managers	2	-	1	3
13. Need to manage the firm's sources of raw materials	3	-	-	3
14. Need to gain Economies of scale in marketing and distribution	-	-	1	1
15. Size of business	-	-	-	-
16. Level of competition in the industry	-	2	-	3
17. Corporate mission	-	-	3	3
18. Investment costs	2	1	-	3
19. Stability of future costs	-	-	-	-

Appendix 4

Factors rated as important by the managers of the steel manufacturers

FACTORS GIVEN	RATINGS BY MANAGERS 1	2	3	TOTAL
1. Need for high market share	2	1	1	4
2. Need for improved co-ordination	1	3	-	4
3. Need for greater control over the firm's economic resources	2	1	1	4
4. Need for improved marketing	-	-	-	-
5. Need to protect the superior knowledge of the firm's products	3	-	1	4
6. Need to maintain technological leadership	-	2	-	2
7. Need to explain to the consumers how to use our products	-	-	-	-
8. Need to build new infra structure	-	-	-	-
9. Need for synergies	2	-	2	4
10. Certainty of demand	-	4	-	4
11. Availability of adequate manufacturing facilities	2	1	1	4
12. Availability of competent managers	2	1	1	4
13. Need to manage the firm's sources of raw materials	2	-	-	2
14. Need to gain Economies of scale in marketing and distribution	3	1	-	4
15. Size of business	2	1	1	4
16. Level of competition in the industry	4	-	-	4
17. Corporate mission	1	3	-	4
18. Investment costs	2	2	-	4
19. Stability of future costs	3	-	-	3

Appendix 6

LETTER TO THE RESPONDENT

RUTH A. ODERA,
FACULTY OF COMMERCE,
UNIVERSITY OF NAIROBI,
P.O. BOX 30197,
NAIROBI.

Dear respondent,

I am a postgraduate student in the Faculty of Commerce, University of Nairobi. This study is being carried out in partial fulfilment of the degree of Master of Business and Adminstration.

I will be quite grateful if you provide the information sought by the questionnaire provided. Your response will be treated in strict confidence and in no instance will your name or that of your organization be named in the report.

Yours faithfully

Ruth Odera

Appendix 7

QUESTIONNAIRE: TO BE COMPLETED BY THE MANAGING DIRECTOR OR HIS EQUIVALENT

Please answer the following questions by placing a tick ( ) in the boxes provided and /or giving the required details.

1. From the list of industries given below, where would you place your company?

[ ] Food manufacturing

[ ] Beverages and Tobacco

[ ] Textiles

[ ] Paper and Paper products

[ ] Steel

[ ] mining

[ ] other (specify)_____

_____

2. Among the processes listed below, which one(s) are you engaged in?

[ ] Produces all of our raw materials

[ ] Produces some of our own materials

[ ] Carries out product development

[ ] Processes raw materials

[ ] Carries out marketing services

[ ] Assembles products

[ ] Carries out warehousing

[ ] Carries out wholesaling

[ ] Carries out transportation services

[ ] Own retail outlets

[ ] owns depots

3. If you carry out the distribution of your finished products, through what channels do you do this.

[ ] a department of the firm.

[ ] a government agency.

[ ] through independent wholesalers

[ ] through independent retailers.

4. For how long has your company been in existence

[ ] less than 10 years.

[ ] More than 10 years but less than 20 years.

[ ] Over 20 years

5. How many employees does your firm have?

[ ] Below 500

[ ] Below 500 but less than 1000

[ ] More than 1000

6. Please state the nature of ownership of your firm

[ ] Government owned

[ ] Foreign owned

[ ] Private owned

[ ] Government/foreign

[ ] other (Please specify)_____

7. There is no consensus as to what the term vertical integration stands for. Please tick the description that best fits your understanding of the concept. If no description does fit your understanding, please give your own.

[ ] Combination of operations such that the finished products of one operation is the raw material for the other.

[ ] Combination under single ownership of two or more stages of production and distribution of goods from raw materials to the final consumers.

[ ] other (Specify) _____

_____

_____

_____

8. Below is a list of some of the factors that firms consider in deciding on whether or not to use vertical integration strateg.. Please indicate how important each of the factors was in your decision to integrate vertically. Tick the relevant box for each of them.

	...ery important	Important	Fairly important	...mportant	Total
Need for high market share	[ ]	[ ]	[ ]	[ ]	
Need for improved coordination	[ ]	[ ]	[ ]	[ ]	
Need for					

greater control over the firms economic resources	[ ]	[ ]	[ ]	[ ]
Need for improved marketing	[ ]	[ ]	[ ]	[ ]
Need to protect the superior knowledge of your products	[ ]	[ ]	[ ]	[ ]
Need to maintain technological leadership	[ ]	[ ]	[ ]	[ ]
Need to explain to the consumers how to use our products	[ ]	[ ]	[ ]	[ ]
Need to build new new infra-structure	[ ]	[ ]	[ ]	[ ]
Need to gain more in profits from working as a single unit (synergy)	[ ]	[ ]	[ ]	[ ]
Certainty of demand for your products	[ ]	[ ]	[ ]	[ ]
Availability of adequate manu-facturing facilities	[ ]	[ ]	[ ]	[ ]
Availability of competent managers	[ ]	[ ]	[ ]	[ ]
Need to manage				

your own raw materials	[ ]	[ ]	[ ]	[ ]	[
Need to gain economies of scale in marketing distribution etc	[ ]	[ ]	[ ]	[ ]	[
Size of the business	[ ]	[ ]	[ ]	[ ]	[
Level of competition in the industry	[ ]	[ ]	[ ]	[ ]	[
Corporate mission	[ ]	[ ]	[ ]	[ ]	[
Investment costs	[ ]	[ ]	[ ]	[ ]	
Stability of future costs	[ ]	[ ]	[ ]	[ ]	

9. What other factors besides the one listed above do you consider important in getting involved in more than one distinct stage of production? Please specify and rate it using the rating scale.

_____

_____

_____

_____

_____

_____

_____

10. Of the factors listed in in numbers 8 and 9, List the five most important factors. List them in their order of importance.

_____

_____

_____

_____

_____

_____

Thank you very much for your contribution

Ruth A. Odera
MBA Student

Dr. K'Obonyo
Dean of Faculty of Commerce
Supervisor

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