

**A SURVEY OF THE VERTICAL INTEGRATION STRATEGIES
USED IN THE AUTOMOTIVE INDUSTRY IN KENYA**

BY

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DECLARATION

This research project is my original work and to the best of my knowledge has not been submitted for a degree course in this or any other University.

Signed  Date 18-Nov-2008
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This research project has been submitted for examination with my approval as the university supervisor.

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DEDICATION

I wish to dedicate this piece of work to my beloved and supportive wife Anne Wangui on whose constant encouragement and love I have relied.

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In the development of this project I have been accompanied and supported by many people. It is a pleasant aspect that I have now the opportunity to express my gratitude for all of them.

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ABSTRACT

Differences amongst competitor value chains are a key source of competitive advantage. The design of the vertical integration strategies is one way to distinguish the value chain of a strategic business unit from its competitors. In Kenya, there are a number of environmental factors that have affected negatively the motor vehicle industry. The market reforms that allow importation of used vehicles in Kenya coupled with the low purchasing power in the country has made the industry very competitive. Currently, used car imports account for 70% of the market. Consequently, the motor industry in Kenya must configure its value chain in a manner that ensures a successful competitive position.

The objective of this study was to establish the vertical integration strategies practised in the automotive industry and to identify the challenges associated with the strategies practised. A census survey was carried out on the new vehicle dealers (or franchise holders). Interviewer administered questionnaires were used to collect the data required. The data collected was analysed using measures of central tendency in order to provide a description of the trends in the industry with respect to vertical integration strategies. Content analysis was carried out to establish the challenges associated with vertical integration.

The design of vertical integration strategies practised in an industry can be distinguished by examining four dimensions namely; the stages, the breadth, the degree and the form of vertical integration. This study has described the industry in these four dimensions of vertical integration and has revealed the challenges associated with the practise of vertical

integration strategies in the industry. The industry has raised four main issues that influence the crafting of its vertical integration strategies namely; assurance of quality, assurance of delivery, cost and ability to raise capital requirements. The industry can be said to have adopted vertical integration strategies that reflect a balance between the strategic benefits of vertical integration and the strategic costs of vertical integration.

CHAPTER ONE: INTRODUCTION

1.1 Background

Every organisation exists in order to create value and survives by achieving some competitive advantage over its rivals. Porter (1985) describes the value creation (value chain) as a collection of activities that are performed by a firm to design, produce, market, deliver and support its product. Porter (1985), argues that to succeed in building competitive advantage, a company's strategy must aim at providing buyers with what they perceive as superior value that is, a good product at a lower price or a better product that is worth paying more for. One way of achieving this advantage is by performing value chain activities differently than rivals (Thompson & Strickland, 1998). Porter (1985) adds that differences amongst competitor value chains are a key source of competitive advantage.

Stonebraker and Liao (2004) point out that supply chain (or value chain) management has been a major source of competitive advantage in the USA and, increasingly, in the global economy. By minimizing the economic costs of manufacturing and delivery and maximizing customer service across numerous stages of production and distribution, supply chain management activities have squeezed costs and redefined the competitive edge in many industries. In brief, supply chain efficiency is increasingly the key source for competitive advantage.

The motor vehicle industry has been used by many researchers to draw lessons on the best practises in the value chain management. This can be attributed to the fact that the industry has been evolving rapidly since the 19th century and that the manufacture of a motor vehicle requires on average ten thousand component parts. The numerous component parts amplify the importance of effective and efficient value chain management in this industry. Langlois and Robertson (1989) have used the automotive industry in the USA to explain various configurations of the value chain and their rationale. In Kenya, the players in the automotive industry have also adopted different strategies in their value chain activities such as manufacturing, assembly and distribution channels to in order to achieve competitive advantage.

1.1.1 Vertical Integration

Harrigan (1985) defines vertical integration as a variety of decisions concerning whether corporations should provide certain goods or services in-house or purchase them from outside, how many activities are performed in-house as compared to outsourcing, and how much is purchased from outsiders compared to serial internal business units. Cox and Blackstone (2001) concur with Harrigan (1985) and define vertical integration as the degree to which a firm chooses to produce in multiple value-adding stages from raw material to the ultimate consumer. Porter (1998) adds that vertical integration defines the division of activities between a firm and its suppliers, channels and buyers. Porter (1998) warns that the definition of vertical integration should not be viewed only in terms of physical goods, but rather in terms of the value system activities that are performed within a firm. Vertical integration therefore refers to the degree of integration between a

firm's value chain and the value chains of its suppliers and distributors (Porter, 1998). These definitions emphasize the choices and tradeoffs in the management of serial production and distribution activities, as well as a range of serial process activities (Cox & Blackstone, 2001).

The vertical integration strategies are used in an organisation as a source of competitive advantage and an opportunity to grow revenue (Johnson & Scholes, 2002). Through adopting a particular strategy of vertical integration a firm may perform its value chain activities differently (better) than its rivals thereby achieving competitive advantage. Cost and differentiation strategies can be obtained through either integration or de-integration (Porter, 1980). For a firm planning to grow its portfolio, vertical integration is used as the first strategy in diversification. Vertical integration has also been useful in developing certain industries especially in the invention stages (Harrigan, 1985).

1.1.2 Overview of the Motor Vehicle Industry in Kenya

The Automotive industry in Kenya deals with the assembly, retail and distribution of motor vehicles. There are ten motor vehicle dealers operating in the country who are franchise holders for new vehicles namely; Toyota East Africa, Cooper Motor Corporation, General Motors, Simba Colt, DT Dobie, Car & General, Kenya Grange Vehicle Industries, Marshalls East Africa, Subaru Kenya and Tata. There are also three vehicle assembly plants in the country, which concentrate on the assembly of pick-ups and heavy commercial vehicles (Njoroge, 2007).

The Kenyan motor vehicle industry was highly attractive for franchise holders in the 80s and early 90s due to the protection it received. After the market reform policies in the 90s, the business environment in Kenya completely changed. Importation of used and new vehicles was allowed. The Kenyan motor industry was thus opened up to compete globally with cheaper vehicles produced from Japan. Sales by the franchise holders dropped drastically as sale of used vehicles began to thrive. Some of the local manufacturers were caught unawares and were forced to make many strategic changes to the value system and the levels of vertical integration (Mwendwa, 2002). Price Waterhouse Coppers (2007) industry sector survey report highlights that the established dealers face intense competition from imported second-hand vehicles, mainly from Japan, East Asia and the United Arab Emirates. These imports now account for about 70% of the market. The slump in the volume of new cars sold is attributable to the increased competition from second hand vehicles and the low purchasing power in the economy (Njoroge, 2007).

Kiragu (2001) argues that imports of vehicles, whether new or used, do not benefit the Kenyan economy. Imports deny Kenyans investments, employment, technology transfer, efficient motoring, revenue for government and Kenyans end-up spending more on inputs. To the individual, the import, especially the used car, might look cheaper because the individual does not pay for the pollution of the environment, distortion of the market and generally all the costs and benefits are not computed and billed accordingly. These sentiments by Kiragu (2001) can be interpreted to mean that the government would be expected to formulate policies that favour the adoption of higher levels of vertical

integration. Kiragu however challenges the franchise holders to lower their cost and to negotiate vehicle financing with banks to make vehicles more affordable.

As a result of the change in the legislative environment, all the motor vehicle franchise holders had to rethink their strategies on vertical integration. Decisions such as to assemble locally or import complete units had to be thoroughly analyzed. Most of the motor vehicle franchise holders have opted to outsource most of the value chain activities in order to reduce costs and to compete globally with the low cost manufactures from Asia. The Kenya Motor Industry Association (KMI), the representative body of the corporate participants in the motor industry, has been lobbying hard to reverse this trend of decreasing sales for the franchise holders . On their part, the companies themselves have become more innovative in responding to customer needs. KMI has been lobbying for the implementation of strict criteria on importation of second hand vehicles, Incentives to promote local assembling of commercial vehicles and Export incentives aimed at encouraging car manufacturers to expand operations in the region (Njoroge, 2007).

Due to the low purchasing power in the country, cost is the major source of competitive advantage in the motor industry in Kenya. In addition, differentiation has also been used to gain competitive advantage. Acclimatizing the vehicle to the tough road and usage conditions in Kenyan has been an order winner. Heavy duty suspension or reinforced chassis are attributes used to differentiate the vehicles. In addition after sales support in terms of availability of spare parts and service support is a source of competitive

advantage in the motor vehicle industry in Kenya. There is a complete customer-orientation by players, especially in the motor vehicle sector. They have restructured themselves to emphasise after-sales service. The level of vertical integration in the industry has been designed giving due respect to after sales requirement (Omondi, 2001).

Distribution channels have been used by the industry to gain competitive advantage. The ownership structure of the distribution channels vary across the industry. Some players own the entire distribution network while as others use autonomous firms to distribute their produces. General Motors East Africa is currently said to be redefining the ownership structure of its distributors in order to enhance efficiencies in meeting customer requirements (Turana, 2007).

There has been a debate in parliament on where to draw the line between monopoly and vertical integration. A member of parliament recently argued that a manufacturer should not own his distribution channels according to the Monopolies and Price Control Act, Cap.504 of the Laws of Kenya. The extent of vertical integration will therefore continue to be influenced by the interpretation of the monopolies act. The requirements for custom made cargo body and passenger body has also shaped the levels of vertical integration in the industry. The demand for commercial goods and passenger transportation has been growing in the country resulting in the rapid growth of the vehicle body building sector. Body building activities in the industry have been outsourced while some firms such as CMC have integrated these activities. The challenge has been to achieve a high quality body at an affordable cost (Omondi, 2001).

1.2 Statement of the Research Problem

Porter (1985), authoritatively states that “whether or not vertical integration (or de-integration) lowers cost or enhances differentiation depends on the firm and the activity involved”. This means that the vertical integration strategies are sensitive to the environment (context) in which they are applied. In other words, the results from vertical integration would vary from one firm to another. Vertical integration has been an important managerial innovation and a necessary step in developing certain industries but this does not mean that it is appropriate in the same form under all circumstances. The reason for or against vertical integration must therefore be analyzed from industry to industry (Harrigan, 1984). It is therefore an issue of significant interest for the researcher to understand the effectiveness of vertical integration in different environments.

Since the liberalization of the Kenyan economy, the franchise holders in the motor vehicle industry has faced fierce competition from imported used cars from Japan, East Asia and the United Arab Emirates (Njoroge, 2007). In order to compete in the free Kenyan market, the franchise holders in Kenya must gain competitive advantage through the cost or differentiation. Porter (1985) has suggested that competitive advantage can be achieved through the redesign of the value system by adopting an appropriate level of vertical integration. This motivates the researcher to seek to understand the vertical integration strategies which franchise holders in Kenya have adopted.

Research done so far on vertical integration has not covered the motor vehicle industry in Kenya. Were (2006) did a survey on the extent of vertical integration in Asian vegetable

exporting businesses in Kenya. Were (2006) concluded that there was a prevalent form of vertical integration in the industry. In addition, his research ranked the factors that greatly influence the extent of vertical integration in the industry. Mahaga (2003) studied the relationship between vertical integration and performance of food manufacturing firms in Nairobi. Mahaga (2003) concluded that vertical integration has a positive correlation with performance in the food industry. Mahaga (2003) further recommended that studies on the impact of vertical integration strategies should be extended to other industries.

Other studies have been done in the motor industry in Kenya but on other concepts of strategic management apart from vertical integration. Busoro (2003) studied the corporate strategic planning among motor vehicle franchise holders in Nairobi, Tuju (2006) focused on the influence of sex appeal in advertising on motor vehicle purchase intention, Machuki (2005) was interested in challenges to strategy implementation at CMC motors Group Ltd, while Muchilwa (2004), Wasike (2005), Mumanya (2005) and Mohamed (1994) focused on the industry's response to various changes in the environment. Clearly, there is a research gap in the concept of vertical integration in the context of the motor vehicle industry in Kenya. The fundamental questions are 'What are the Vertical Integration Strategies used in the motor vehicle industry in Kenya? Are there challenges associated with the use of vertical integration strategies?'

1.3 Objectives of the Study

The objectives of this study were:

- (i) To establish the vertical integration strategies used in the motor vehicle industry in Kenya.
- (ii) To establish the challenges associated with vertical integration in the motor vehicle industry in Kenya.

1.4 Importance of the Study

This study is of significant value to three key stakeholders namely the motor vehicle industry, the policy makers in government and Researchers. To the industry players, the study has brought out the pertinent issues that must be considered before implementation of vertical integration strategies. The managers in the industry are guided on how to find the optimum balance between the expected profit gains due to decreased transaction costs and the possible costs of increased inefficiencies from the administration of a larger value chain. The study provides a reference to the industry for drawing strategies to gain competitive advantage through the reconfiguration of their value system.

To the policy makers, the study is a reference in making policies that facilitate vertical integration as a possible strategy. The study enlightens policy makers on the desirable level of vertical integration in the automotive industry. Policies to encourage industry players to increase their scope of value adding activities can be guided by the results of

this study. Policy makers can also use information from this research to make policies that are sensitive and aligned with the industry preferences and practises.

To researchers, the study provides empirical evidence to validate or invalidate the arguments for and against vertical integration within the context of the automotive industry in Kenya. Researchers will also gain from the insights into the challenges associated with the implementation of vertical integration strategies in the motor vehicle industry context. Areas for further research have been proposed in this study for academicians to pursue.

CHAPTER TWO: LITERATURE REVIEW

2.1 Vertical Integration

Harrigan (1985) defines vertical integration as a variety of decisions concerning whether corporations, through their business units, should provide certain goods or services in-house or purchase them from outsiders instead. Harrigan (1985) adds that vertical integration is usually one of the first diversification strategies that firms consider as they progress from being single-business companies. The formulation of vertical integration strategies is the responsibility of the Chief executive officer since it requires the cooperation of several strategic business units. Cox and Blackstone (2001) define vertical integration as the degree to which a firm chooses to produce in multiple value-adding stages from raw material to the ultimate consumer. This latter definition emphasizes the choices and tradeoffs in the management of serial production and distribution activities, as well as a range of serial process activities. Barney (1997) adds that the number of stages in a product's or service's value chain that a particular firm engages in defines the firm's level of vertical integration, that is the greater the number, the more vertically integrated a firm is and vice versa.

Vidal (2006) defines vertical integration as an approach for increasing or decreasing the level of control which a firm has over its inputs and distribution of outputs. Vertical integration is seen as the extent to which an organization controls its inputs and the distribution of its products and services. Porter (1998) adds that vertical integration defines the division of activities between a firm and its suppliers, channels and buyers.

From the value chain theory, Porter (1998) describes vertical integration as the degree of integration between a firm's value chain and the value chains of its suppliers and distributors. Porter (1998) however warns that the definition of vertical integration should not be viewed only in terms of physical goods, but rather in terms of the value system activities that are performed within a firm.

Since Ronald Coase's famous article on the "Theory of the Firm" in the 1930s, economists have been alert to the importance of transaction costs in explaining the structure of economic organizations. The transaction costs comprise such less tangible costs as those involved in search, negotiation, and monitoring. Williamson (1985) is one of the writers who argue strongly that the pattern of vertical integration in an industry reflects a minimizing of the sum of production and transaction costs, not just production costs alone. Porter (1980) describes vertical integration as the combination of technologically distinct production, distribution, selling and/or other activities within the confines of a single firm. Vertical integration therefore represents a balanced decision between utilizing internal or administrative transactions and market transactions to accomplish economic purposes. For example, a firm with its own sales force could have contracted an independent selling organization to supply the selling services it requires. All functions that an organisation performs could, in theory, be performed by a consortium of independent economic entities each contracting with a one central coordinator. However for reasons such as cost, risk and coordination, most firms prefer to perform most of their activities in-house rather than through contracts (Porter, 1980).

There are disagreements amongst scholars on the effectiveness of the use of vertical integration strategy in business today. There are arguments for and against vertical integration and the rationale for vertical integration has been changing over the years. Coase (1937) argues for vertical integration citing elimination of transaction costs due to existence of separate firms. Harrigan (1984) argues that the vertical integration limits a firm's flexibility in this advent of fast technological changes. Madhok and Osegowitsch (2003) argue that firms should "stick to their knitting and outsource everything else". The fact is that some companies do practice vertical integration while others don't. Harrigan (1984) contends that there are generic vertical integration strategies each of which is appropriate under different competitive circumstances. She adds that the generic vertical integration strategies are mere suggestions which require empirical testing. Harrigan (1985) is of the view that vertical integration strategies are not successful in the same form in all circumstances and recommends that managers should craft these strategies with respect to the prevailing environment.

2.2 Historical Developments of Vertical Integration and the Motor Industry

Vidal (2006) explains that the strategic reasons for opting for a vertical integration strategy have changed over the years. During the 19th century, firms used vertical integration with the objective to achieve economies of scale and reduce transaction costs. Transaction costs include the costs of finding, selling, negotiating, monitoring, and resolving disputes with other firms in open market transactions (Coase, 1937). For example, ownership of ore mines, ship foundries, rolling mills and fabricating plants was necessary for steel companies to lower costs and improve productivity (Harrigan, 1984).

Langlois and Robertson (1989) explain that in the pre-1900 era of motor vehicle invention, the Ford Motor company was highly integrated and operated every stage of processing from iron ore to finish and trim operations. At the era of invention, suppliers may have been unwilling to share the risk that Ford took in persuading customers to buy 'horseless carriages'. Harrigan (1984) proposes that such high degree of vertical integration would be expected within emerging industries where firms must provide their own infrastructure and suppliers due to the fact that the innovation is not known. Young (1928) and Stigler (1951) argue that the firms in an industry are initially vertically integrated and that increasing output leads to differentiation as various stages of the production process are spun off into specialized concerns. The two authors argue that small firms in industries with limited output might need to undertake the production of intermediate goods because outside suppliers would not find it profitable to manufacture on such a limited scale but an expansion of the output of final products could permit specialized firms to take over the production of intermediate goods.

By the turn of the twentieth century, the capabilities to manufacture parts adaptable to the automobile already existed in the American economy. The automobile industry had matured and the risks relating to product demand was reduced. Outside suppliers for Ford Motor Company were willing to invest in tooling and other assets to supply auto makers. The high degree of internal transfers was no longer necessary if economic (Harrigan, 1984). Vidal (2006) adds that during the middle of the 20th century, vertical integration was used to assure a steady supply of vital inputs. In some cases, the theory of

transaction cost economics was applied to backward integration or forward integration, as a means to total cost reduction. That is, it was cheaper for a firm to perform the role of suppliers and distributors than to spend time and money to interact with such parties.

Subsequently, in the late 20th century, competition intensified in most industries. Corporate restructuring resulted in vertical disintegration by reducing the levels of vertical integration in large corporations. The developments in information technology led to the reduction in transaction costs. Lower transaction costs attracted firm to disintegrate vertically as explained by Coase's law of diminishing demand which states that when transaction costs are decreasing, the size of the firm will also decrease (Vidal, 2006).

2.3 Dimensions of Vertical Integration

Harrigan (1984) contends that the concept of vertical integration should be expanded to encompass a variety of arrangements by which a firm can use outsiders as well as its own business units to forge an optimal vertical system for supplying goods services and capabilities. She suggests that in developing vertical integration strategies, it is important to recognize four fundamental possibilities and dimensions. First, that a firm may control vertical relationships without fully owning adjacent business units, secondly that a firm may enjoy benefits of vertical integration without transferring all of their output internally, thirdly that a firm may or may not perform a variety of integrated activities at a particular stage of processing and fourthly that a firm may engage in many or few stages of processing in the chain of production from raw material to the final consumer. A firm

can adjust these dimensions of vertical integration to suit competitive or corporate needs (Harrigan, 1985).

Harrigan (1985) describes the four dimensions which are usually taken into consideration consciously or unconsciously when crafting vertical integration strategies namely; the number of stages of integrated activities, the breadth of integrated activities undertaken, the degree of internal transfers for each vertical linkages and the form of ownership used to control the vertical relationship.

The number of integrated stages refers to number of step in processing from raw materials to the final consumer which a firm is engaged in. The number of stages in firms may differ because it is possible for one firm to skip a stage in the value chain by suing outsiders for an intermediate processing step in order to monitor costs better or to save on asset investment for facilities that would be under utilized if brought in house, or for other strategic reasons (Harrigan, 1985).

The breadth of integrated activities describes the number of tasks that firms perform in-house at any particular stage of the vertical chain. Firms performing many activities in one stage are broadly integrated while firms performing few vertically related activities are narrowly related. Breadth of integration distinguishes a firm producing many products from one producing a single product. Harrigan (1985) however cautions that a very broadly integrated firm producing too many diverse components may lose opportunities to enjoy economies of scale.

The degree of integration describes the proportion of total output of a particular component or service that a strategic business unit (SBU) purchases from its sister SBU. Fully integrated firms transfer over 95% of their requirements for a particular resource in-house. Taper integrated firms purchase over 5% of their requirements for that resource from outsiders (Harrigan, 1985). Simply defined, tapered integration relates to firms producing their own requirements internally and contracting for the rest. Taper integration represents a partial integration that makes a firm dependent on external sources for the supply of a portion of a given input (Hax & Majluf, 1996). The degree of integration influences the capacity balance between upstream and downstream activities (Harrigan, 1985).

The most common quantitative measure of vertical integration is the ratio of value added to sales. According to Tucker and Wilder (1977), the rationale for this measure is that value added may be viewed as the difference between sales and purchased material inputs (i.e. inputs other than labour and capital). Hence, for a given firm or industry, backward integration will tend to reduce the purchases of material inputs while leaving sales of final outputs constant, with a resulting increase in the ratio of value added to sales. Similarly in forward vertical integration, sales will tend to increase more than proportionally to purchased material inputs, also resulting in an increase in the ratio of value added to sales. According to Hax and Majluf (1996), the degree of backward integration can be measured by the percentage of requirements of a particular product that the firm secures from internal sources while the degree of forward integration can be measured by the percentage of output that is transferred directly to a sister unit .

The form of ownership describes the proportion of a firm's equity invested in a vertically linked venture. Porter (1980) and Harrigan (1985) agree that on the fact that firms do not need to own a business in order to control it and to enjoy the benefits of vertical relationships. Control arrangements can be achieved through various forms of quasi-integration such as joint ventures or alliances, minority equity investment, loans, loan guarantees, licensing agreements, franchises, R&D partnerships and exclusivity contracts (Hax & Majluf, 1996). Porter (1980) describes quasi-integrated firms as firms which use debt or equity investments and other means to create alliances between vertically related firms. Hax and Majluf (1996) describe quasi-integrated firms as firms which do not have full ownership of all their assets in the value chain but they resort to other mechanisms to assure steady relationships with their external constituencies.

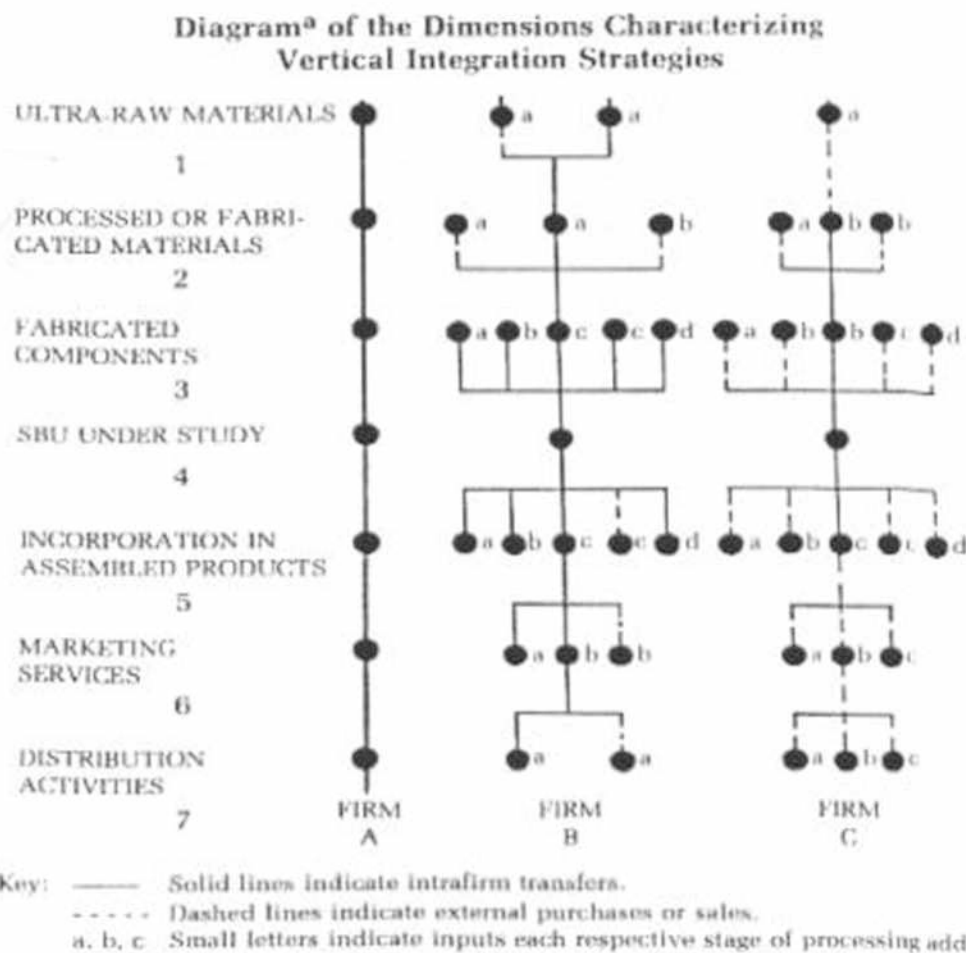
Figure 1 illustrates clearly the various dimensions of vertical integration strategies adopted by three arbitrary firms – Firm A, Firm B and Firm C. Firm A is engaged in many stages of integrated activity but adds only one input per stage of processing (it is narrowly integrated). Firm A transfers all of its outputs from stage 1 to stage 2 (from stage 2 to stage 3, et cetera) in-house and does not purchase any inputs from (nor sell any outputs to) outsiders. Firm A is fully integrated from stage 1 to stage 7.

Firm B makes four inputs (a, b, c, and d) at stages 3 and 5, respectively. Firm B purchases some 2b from (and sells some 5c to) outsiders. Firm B is more broadly integrated at stages 3 and 5 than at stages 2 and 6 (because it performs more activities there). Firm B is engaged in many stages of integrated activity, but because the firm

purchases some of its requirements from outsiders, its degree of integration for some activities is lower than Firm A's. Firm B is taper integrated.

Firm C makes only b at stages 3 and 2 and c at stage 5, Firm C is narrowly integrated and engages in few stages of integrated activity. It produces some inputs internally but purchases some 2b and 3b from (and sells some 5c to) outsiders, making it taper integrated.

Figure 1: Diagram of the Dimensions Characterizing Vertical Integration Strategies.



Source: Harrigan, K.R. (1985). *Vertical Integration and Corporate Strategy*. *The Academy of Management Journal*, 28 (2), pp 400

Table 1: Measurements of the dimensions of Vertical Integration with examples

Dimension	Measurement	Example 1	Example 2
Degree of backward of integration.	Requirements for a particular resource the business unit obtains from upstream sister business unit.	Sohio (Standard Oil of Ohio) produces more crude oil than it consumes in-house. From the viewpoint of Sohio's refinery unit, it is fully integrated for crude oil.	Mobil is crude short and must purchase much of its crude oil needs from outsiders. It is taper integrated and supplies a low percentage of crude oil needed to its refinery unit.
Degree of Forward Integration	Percentage of outputs a business units sells to (or through) sister unit.	Upjohn sells ethical pharmaceuticals primarily through its own direct distribution organization. Since it does not sell all its output through this conduit, however (it uses some wholesalers). Upjohn is taper integrated to drug distribution services unit.	Lilly uses wholesalers almost exclusively (except for government sales). It is taper-integrated and sells a low percentage of its output through in-house sales unit.
Stages of Integrated Activities	Relative (index) number of steps in the transformation process firm undertook times the value added percentage	Texas Instruments produces silicon substrates, photo-masks, semiconductors chips, personal computers and (for a few years) had its own retail stores for demonstrating and selling consumer electronics products. It was engaged in many stages of integrated activity and has a high index of integration.	Apple Computer makes no components and it has no retail outlets. It is engaged in only one stage of activity and its index of integration is low. Osborne Computer was merely an assembler; it had the lowest index value in that industry

Breadth of activities undertaken	Number of activities (at one stage of processing) firm is engaged in divided by the number of activities it is possible to engage in.	Hiram Walker-Gooderham & Worts produced its own barrels, glass containers and grain brokerage services (at one time) to supply the whiskey it distilled. In the whiskey business, Hiram Walker was broadly integrated.	Heublin did not bottle its own whiskey. It sold whiskey under its own labels that was bottled by outsiders; It engaged in few activities and was very narrowly integrated.
Form of the venture	Percentage of ownership in the venture.	Royal Dutch-Shell proposed to build a coal gasification facility that would be jointly owned with Shell Oil (U.S.A.). This would be a wholly-owned venture from the viewpoint of Royal Dutch- Shell, although Harrigan would argue it was an 'internal joint venture'.	The Great Plains Associates jointly owned the coal gasification project in Beulah, North Dakota. From the viewpoint of American Natural Resources, this was a joint venture.

Source: Harrigan, K.R. (1986). Matching Vertical Integration Strategies to Competitive Conditions. *Strategic Management Journal*, 7 (6), pp 539.

2.4 Forces Affecting the Choice of Vertical Integration Strategies

The dimensions of vertical integration that a firm chooses will depend on four main factors. First the phase of industry development whether it is an embryonic or an established industry. The phase of development can be indicated by the sales growth or the uncertainty of demand. Uncertain demand and high variability in demand would be expected to discourage the degree of vertical integration. Embryonic or pioneering industries would be expected to have a high degree of vertical integration (Harrigan,

1985). The volume of purchases of the firm contemplating backward integration must be large enough to reap all economies of scale in producing the input (Porter, 1980). Walker and Weber (1984) studied automobile component procurement and found that uncertainty about production volume raises the probability that a component is made in-house. Fine and Whitney (1996) observe that "generational breakthroughs typically require an integrated product architecture created by a vertically integrated firm, with correspondingly limited outsourcing". Christensen (2002) offers an explanation as to why this is the case reasoning that successful innovators in the marketplace tend to have products that are based on relatively integrated architectures. This happens, he says, because "competitive pressure compels engineers to fit the pieces of their systems together in ever more efficient ways in order to wring the best performance possible out of the available technology".

Secondly, volatility of competition will increase the risk of integrating vertically since competitors are likely to have price wars to fill their capacity. When the competition is intense SBUs will make less in-house and purchase more from outsiders and vice versa. Quinn et al. (1990) note that firms operating in competitive, turbulent environments tend to avoid vertical integration to minimize the risks associated with an elaborate and more inflexible structure. Thirdly, firms with a high bargaining power over its suppliers will most likely have low degrees of vertical integration. Tucker and Wilder (1977) argue that the existence of market imperfections encourages vertical integration. In this regard, firms may integrate backward or forward in response to monopoly power.

Finally, corporate strategic objectives determine the firm's dimensions of vertical integration. For example, firms seeking to penetrate mature markets with new products will integrate forward to prove their product's superiority and maintain full ownership of activities they deem to be of strategic choice. Other strategic objectives that would increase the perceived attractiveness of vertical integration include opportunities to increase value-added margin, to protect product quality, proprietary knowledge or manufacturing integrity and intelligence gathering (Harrigan, 1985).

2.5 Strategic Benefits of Vertical Integration

A firm with sufficient volume of throughput will enjoy economies of scale resulting in cost reduction in the various stages of the value chain. The combination of the distinct operations in a firm results in efficiency gains, which are realized by the reduction in the number of steps in the manufacturing process and reducing handling costs and transportation costs. Coordination and internal controls is easier as a result of the adjacent locations, trust among sister units, better control of production schedules and easier coordination of product changes (Stonebraker & Liao, 2004). Integration allows the firm to obtain faster and more accurate information about the marketplace at a lower cost. This implies that the cost of monitoring and predicting demand, supply and prices is lowered by sharing costs across the integrated firm. Marketing costs such as sales force, advertising, price shopping, negotiation and other transaction costs are reduced in integrated firms because only very small internal discussions are required for internal transfers. People can therefore work better and develop ideas faster within a single organization than among different ones (Perron & Platts, 2005).

Units in an integrated firm enjoy a stable relationship that enables the units to increase their efficiency and to adopt to each others requirements. Upstream units will produce a product that meets the quality specifications of the downstream unit (Porter, 1980). The familiarity in technology in the upstream and downstream units may be a critical success factors. Vertical integration enables the upstream and downstream units to tap into the technology of the firm. Fine and Whitney (1996) front the "learning by doing" theory, which urges that managers should retain technologies in-house as a means to understand them better. For example most computer firms have integrated backwards into the chip design and manufacture to enable them understand and lead in this technology. Hitt et al (1997) argue that vertical integration is on way of protecting core technology from imitation. Ruffo et al (2007) argue that core capabilities should remain in-house to guarantee competitive advantage.

Vertical integration reduces the uncertainty of supply and demand and hedges the firm against prices fluctuations above the market price. There are lower risks of interruption, no changes in suppliers or customers and no risk of prices above the market price. Theoretically, integrated firms internalize input and output activities within their boundaries to reduce the risks and costs associated with self-interested behaviour by suppliers or buyers and uncertain market exchanges (Carlton, 1979; Coase, 1937). According to Robinson and Pierce (2002), the main reason for backward integration is the desire to increase the dependability of supply or quality of raw materials or production inputs. To the extent that backward vertical integration improves the ability of the downstream firm to forecast the input price and hence to improve the input-mix

decision, the downstream firm will have an incentive to undertake vertical integration of this type (Tucker and Wilder, 1977). Vertical integration is used as a strategic tool to offset the bargaining power of suppliers and customers. Backward integration may allow the firm to lower cost of supply while forward integration may be used to raise price and at the same time to gain efficiencies by eliminating powerful suppliers or buyers. The distribution channels can be used to offer superior service while in-house units can produce differentiated proprietary components (Porter, 1980).

The benefits a firm enjoys from vertical integration give it competitive advantage over the un-integrated firm. New entrants will thus be forced to enter as integrated firms in order to compete. Due to the high capital investment required, mobility barriers will be erected making the industry to be attractive to the firm. Additionally, firms may integrate to facilitate the practice of price discrimination or to raise entry barriers in one or more of the vertically related markets (Tucker and Wilder, 1977). The more significant the benefits of vertical integration, the greater the pressure on other plants to also integrate. Vertical integration may increase firms overall return on capital especially if the stage being contemplated does not require a high investment compared to the return it will give. Vertical integration also allows a firm to defend against foreclosure of access to suppliers or customers if competitors are integrated (Porter, 1980).

2.6 Strategic Costs of Vertical Integration

To integrate vertically a firm will incur costs to overcome entry barriers such as capital requirements, cost to access to favourable raw materials or cost to access to distribution

channels. Vertical integration increases the proportion of a firm's costs which are fixed thus increasing business risk in the event of fluctuating demand. The business risk exists because goods made in-house bear fixed costs which will continue to be incurred even with no demand while goods bought from outside supplier are variable costs which can be eliminated if demand diminishes. Vertical integration introduces inflexibility in making changes when the integration relationship is no longer favourable. This strategy should be avoided when technology changes quickly (Hitt et al, 1997). Environmental changes can create a situation in which the in-house supplier provides a higher cost or inferior good compared to the marketplace or the distribution channel starts to lose market share. Vertical integration raises the cost of switching to another supplier or buyer as opposed to switching with contracted independent entities. Vertical integration also raises exit barriers associated with specialized assets, strategic interrelationships or emotional ties (Hax & Majluf, 1996; Porter, 1980).

Vertical integration consumes capital resources which have an opportunity cost. The integration must therefore yield a return higher than the cost of capital for it to be justifiable. If capital needs are higher than the ability of the firm to raise capital then integration may drain capital needed elsewhere in the business. Additionally, vertical integration may cut off the firm from the flow of technology from its suppliers or customers. Integration means that the firm will develop its own technology rather than relying on outsider firms. The risk to the integrated firm is when the independent suppliers have large-scale research efforts or particular know-how that is hard to replicate, then the firm cannot utilize such developments since it is seen to be in competition with

the supplier or customer firms. Customer firms are also relying more and more on their suppliers for new innovations because of the increasingly prohibitive costs of R&D (Manders & Brenner, 1995).

An imbalance between the upstream stages and downstream stages results in excess capacity or capacity shortage that forces the firm to purchase or sell in the open market or to sacrifice its market position. Buying or selling from the open market may compel the firm to deal with its competitors who may be reluctant or strengthened by the deal. Vertical Integration requires that the firm maintains a balance among various stages of the value chain else the firm incurs penalties in excess capacity and unfulfilled demand simultaneously (Hax & Majluf, 1996). Porter (1998) has also argued that buying and selling internally does not give the units competitive pressure required to drive positive performance. He suggests that internal transactions should allow managers the freedom to use outside sources or sell outside if the inside unit is not competitive. This however is not the case due to the empathy accorded to a sister unit when it's not performing well. The risk is that when one unit is unhealthy and not checked, the sickness is spread to the entire organisation. Vertical integration involves business with different structures, technology and management in the vertical relationship for example, manufacturing and retailing. The risk is that management may be capable of effectively managing one part of the vertical chain well and incapable of managing the other (Porter, 1980). According to Robinson and Pierce (2002), the risks result from expansion of the company into areas requiring strategic managers to broaden the base of their competencies and assume additional responsibilities.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Research Design

The research was a survey because there was need to collect data from a number of respondents in order to get a comprehensive understanding of the vertical integration strategies practised in the industry. The study was quantitative because the dimensions of vertical integration are measurable and were established and analysed quantitatively. On the other hand the challenges associated with vertical integration strategies relied on qualitative data therefore adding qualitative attributes to the research design. Cooper and Schindler (2003) define qualitative research as a study that is based on data collected mainly be about the idea and theme rather than quantities. The qualitative research was used to give the researcher an in-depth exploration of the issue. The research was descriptive by objective because it sought to describe the existing strategies of vertical integration in the motor vehicle industry. The research was also a cross-sectional study because the researcher was taking a snap shot of the vertical integration strategies prevailing at the time of research in the motor vehicle industry.

3.2 Population of the Study

The study aimed at establishing the vertical integration strategies amongst the new motor vehicle dealers (or franchise holders) in Kenya. The population therefore consisted of all motor vehicle franchise holders in Kenya that dealt with new vehicles and were operating their business in year 2006. These franchise holders are all members of the Kenya Motor

Industry (KMI) and the research targeted all the ten motor vehicle dealers operating in the country (See appendix 2).

Since the population was small and all the elements were geographically located in one area (Nairobi), a census survey was carried out and there was no need for sampling. The population elements in this study consisted of the ten franchise holders operating in Kenya in 2006. Cooper and Schindler (2003) state that census survey are more appropriate than sample survey when the population is small and when the elements are quite different from each other. The two scholars add that when the population is small and variable then any sample drawn may not be representative of the population values. Cooper and Schindler (2003) recommend a census survey for a population whose elements are less than fifty. Kothari (1990) supports Cooper and Schindler's proposition and emphasizes that when the population (or universe) is a small one, it is no use resorting to a sample survey. Kothari (1990) argues that with a census survey all population elements are studied eliminating any element of chance and the highest accuracy is obtained. The benefits associated with sampling such as cost, accuracy of results, speed of data collection and availability of population elements are less compelling when the population is small and variable (Cooper & Schindler, 2003).

3.3 Data Collection Method

This research used primary data since the information required was not been documented before. Structured interviews were conducted with a management level representative of the firm working drawn from the Sales, Marketing or Production departments. Interviewer-administered questionnaires were used rather than self-administered questionnaires in order to clarify the questions and variables to the interviewee and to ensure there is no misunderstanding in the interpretation of the concepts. Cooper and Emory (1995) argue that personal interview provides the highest depth, detail and quality of information compared to telephone and mail survey. In addition the structured interviews gave a higher response rate and eliminated delays associated with receiving responses from self administered questionnaires. Most authors agree that the face-to-face interview method produces the best, highest-quality data. This is attributed to the fact that more questions can be asked, the interviewer can tell when the interviewee does not understand the question and that it produces a higher response and completion rate (Janes, 2001).

Closed and Open questions were used in the questionnaire in order to obtain specific and descriptive information about vertical integration (Saunders et al, 2003). The questionnaire was divided into three sections (A, B and C) in order to easily match the research objectives to the questionnaire structure. Section A sought to obtain background information regarding the organization to be surveyed. Section B had questions that sought to obtain information about the strategies of Vertical Integration strategies practised by the industry pursuant to specific objective (i). Section C had questions that

sought to establish the challenges associated with Vertical Integration pursuant to specific objective (ii).

3.4 Data Analysis

Data collected was screened for any errors and omissions then telephone calls were made to correct the data and to ensure that it was complete and consistent. Saunders et al (2003) states that editing of primary data collected is the first step in data analysis. Interval data was used to measure each of the four dimensions of vertical integration that is the degree, breadth, stages and form. Measures of central tendency mainly the mode were used to establish the most dominant dimensions of vertical integration pursuant to specific objective (i) which seeks to establish the dominant dimensional mix of vertical integration strategies in the industry. Univariate analyses were done for each dimension strategy of vertical integration strategy one at a time. A frequency distribution table was developed to show the dominant dimensions of vertical integration in addition to the measures of central tendency. Content analysis was carried out to establish the challenges associated with vertical integration pursuant to the second specific objective.

CHAPTER FOUR: DATA ANALYSIS AND INTERPRETATION

4.1 Introduction

The data collected from this study has been analyzed and summarized through percentages, mean scores and averages as set out in chapter three. A summary table for each dimension of vertical integration has been developed in order to provide a description of the general trend in the industry with respect to vertical integration. In addition, the key challenges associated with vertical integration strategies have been summarized in this chapter. The analysis provides the researcher basis to deduce conclusions and meet the objectives of this study which are to establish the vertical integration strategies in use in the motor vehicle industry and the associated challenges. A total of 10 questionnaires were completed from the 10 franchise owners of new vehicles giving a 100% response rate. The high response rate in this study was attributed to the small population size, the data collection method used and the existence of good networks within the industry.

4.2 General Information on the Automotive Industry in Kenya

In order to understand the motor vehicle industry better, it was necessary to get background information relating the industry. For example, the ownership structure in the industry, the duration of operation in Kenya and the market share. The background information was important to collect though it may or may not have a direct bearing on the vertical integration strategies practised in the industry.

4.2.1 Ownership structures

The results in table 2 show that the majority, 40%, of the new vehicle franchise holders are private local companies. 30% are public companies listed in the Nairobi stock exchange while 30% have foreign ownership.

Table 2: Ownership structures in the industry

Ownership	Frequency	Percentage
Foreign Direct Investment	2	20%
Foreign and Local ownership	1	10%
Public companies (Listed in the Nairobi Stock Exchange)	3	30%
Privately owned local companies	4	40%
Total	10	100%

Source; Survey data (2007)

4.2.2 Duration of operation in Kenya

The results in table 3 shows that 80% of the franchise holders were incorporated more than 20 years ago meaning that they relatively old in the market. The youngest player in this industry as at 2006 is seven years old.

Table 3: Duration of operation in Kenya

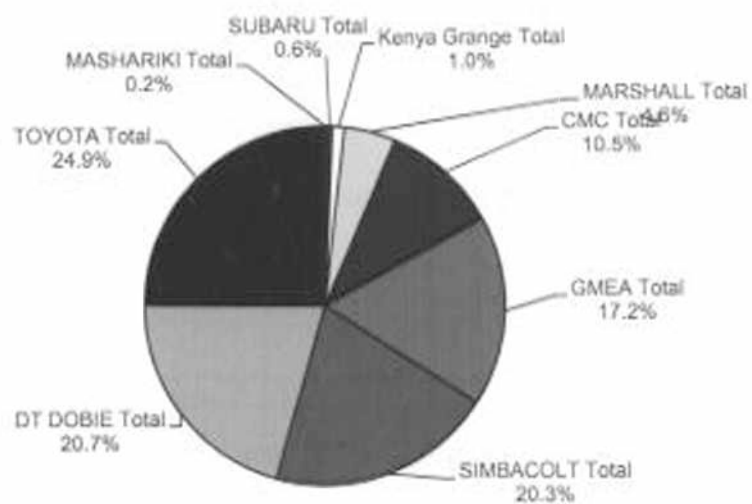
Duration	Frequency	Percentage
Less than 10 years	2	20%
10 to 20 years	0	0%
Over 20 years	8	80%
Total	10	100%

Source; Survey data (2007)

4.2.3 Market share in 2006

The total market size for new vehicles in 2006 was 10,051 units. The market is controlled by 5 main players with more than 80% of the industry sales. The other 5 firms compete for less than 20% share.

Figure 2: Market share in 2006



Source; KMI (2006)

4.3 The Dimensions of Vertical Integration Practised

Five dimensions of vertical integration are analysed in this study. These are the degree of backward integration, the degree of forward integration, the stages of integrated activities, the breadth of activities undertaken and the form of the venture.

4.3.1 Degree of Backward Integration

The majority of firms are practising no backward integration. These firms receive the product already complete from their overseas franchise owners who have no ownership in the firms. Only 20% of the firms are practising backward integration. Toyota receives complete vehicles from its mother corporation while as General Motors East Africa assembles most of the vehicles in its own plant in Kenya.

Table 4: Degree of Backward Integration

Duration	Frequency	Percentage
Non-integrated (No intra-firm transfers)	8	80%
Taper-integrated (between 0% and 80% intra-firm transfers)	0	0%
Fully-integrated (more than 80% intra-firm transfers)	2	20%
Total	10	100%

Source; Survey data (2007)

4.3.2 Degree of Forward Integration

Despite all the motor vehicle having some independently owned dealerships, the firms in the industry make most of their sales through their fully owned distribution units. The independent dealer units are not making as much sales as the distribution units owned by

the franchise owners. The firms are therefore fully integrated with more than 80% sales made through the franchise owner's sister units.

Table 5: Degree of Forward Integration

Duration	Frequency	Percentage
Non-integrated (No intra-firm transfers)	0	0%
Taper-integrated (between 0% and 80% intra-firm transfers)	2	20%
Fully-integrated (more than 80% intra-firm transfers)	8	80%
Total	10	100%

Source; Survey data (2007)

4.3.3 Breadth of Vertical Integration

The industry has an average breadth with the firm's breadth of integration ranging from 43% to 65%. Most of the activities that the firms consider to be critical have remained in-house while the rest have been outsourced.

Table 6: Breadth of Vertical Integration

Duration	Frequency	Percentage
Not broad (fewer than 50% of all activities)	5	50%
Average breadth (50% to 75% of all activities)	5	50%
Broadly-integrated (more than 75% of all activities)	0	0%
Total	10	100%

Source; Survey data (2007)

4.3.4 Stages of Vertical Integration

The firms in the industry participate in few stages in the value chain. 80% of the firms prefer to concentrate on the latter stages of the value chain with no participation in the

backward stages. This is in line with the high degree of forward integration practised in the industry.

Table 7: Stages of Vertical Integration

Duration	Frequency	Percentage
One stage (less than 10% of all stages)	0	0%
Few stages (between 10% and 80% of all the stages)	8	80%
Many stages (More than 80% of all the stages)	2	20%
Total	10	100%

Source; Survey data (2007)

4.3.5 Form of Venture

70% of the firms in this industry have combination of contract and wholly-owned dealership. This means the firms own a few of the dealers while the other dealers are independent. 30% of the firms wholly-own the entire distribution network – these firms are public companies

Table 8: Form of Venture

Duration	Frequency	Percentage
Contracts only (0% ownership)	0	0%
Quasi integration (less than 95% ownership)	0	0%
Wholly-owned (95% or more ownership)	3	30%
Combination of Contracts & Wholly-owned	7	70%
Total	10	100%

Source; Survey data (2007)

4.4 Challenges associated with Vertical Integration Strategies

The challenges associated with vertical integration were analysed in two broad categories. First, were the challenges of owning suppliers or distributors i.e. the challenges of practising a high degree of vertical integration. Secondly, the challenges of working with independent (outside) suppliers or distributors were analysed i.e. the challenges of practising a low degree of vertical integration.

4.4.1 Challenges of owning suppliers or distributors

The challenges of vertical integration were analysed using the content analysis method. The respondents explained that their business units experience the four main challenges because of owning their own suppliers or distributors. First, there are high capital requirements to start up the upstream or downstream sister units. This has limited most players from owning the entire value chain. The few firms that own the entire value chain in the motor vehicle industry have raised funds through a public offering in the stock exchange.

Secondly, there are higher fixed costs attributed to the many business units. Examples given in the study from a distribution network include; increased the staff costs, rental costs and asset depreciation costs that a firm has to absorb. Thirdly, the large size of the organization increases the complexity of managing the organization. The firms surveyed have distribution outlets spreading across the country thus the geographical spread compounds the complexity of management. Finally, owning the distributors introduces bureaucracies and slows the decision making process. This was explained in terms of

distribution units who have to seek approval of the head office before they make some decisions affecting the local business unit.

4.4.2 Challenges of working with independent (outside) suppliers or distributors

The respondents whose firms work with independent suppliers or distributors stated the key challenges they encounter from this relationship. The respondents stated the four key challenges of working with independent suppliers or distributors. First, the suppliers are not reliable in delivering inputs according to the required time deadlines. This delay from the supplier translates to delay in delivering to the final customer therefore reducing customer satisfaction.

Secondly, poor quality from the suppliers was sighted as major concern. The motor vehicle firms which rely on outside suppliers for components or vehicle assembly were generally not satisfied with the quality management systems at their suppliers. Thirdly, the independent distributors lack adequate resources to run efficient retail outlets. The distributors are unable to stock appropriately and have retail outlets facilities that do not meet the franchise holder's expectations. Lack of financial muscle from the independent suppliers or distributors weakens the effectiveness of the entire value chain. Finally, the respondents felt that the cost of inputs that suppliers charged was very high thereby making their products uncompetitive. This statement was made drawing comparisons from the global market and for this reason some of the franchise holders have started sourcing their inputs internationally.

CHAPTER FIVE: SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Summary, Discussions and Conclusions

The research results gives the researcher empirical support to make conclusions regarding the vertical integration strategies in the automotive industry in Kenya. The first research objective sought to establish the vertical integration strategies practised in the automotive industry in Kenya. The automotive industry in Kenya practises a low degree of backward integration with firms not keen to produce their own inputs. This was attributed to poor economies of scale and technological barriers in producing the inputs. The industry practises a high degree of forward integration with most dealers making the majority of their sales through distribution outlets that they own.

The breadth of vertical integration practised in the industry can be described as 'not broad' or average. The industry prefers to keep in-house only what the firms consider to be critical while the other non-core and non-critical activities have been outsourced. The industry participates in only a few stages in the vertical integration chain. Most of the firms prefer to concentrate on the latter stages of the value chain with no participation in the earlier stages. This collaborates with the earlier description of high degree of forward integration and low degree of backward integration practised in the industry. The form of venture in the vertical integration relationships consists of a combination of both wholly owned distributors and contracts with independent firms. This means the firms own a few of the dealers while the other dealers are independent. This was attributed to the high

investment capital that would be required to build a fully owned distribution network whose footprint covers the entire country. The firms have therefore resulted to owning the main distributor and engaging independent firms to set up distribution outlets on mutually agreed contract terms.

The automotive industry in Kenya disclosed four main challenges that it encounters in practising a low level of vertical integration strategies. First, the independent firms are unable to assure supply within the short lead times required by the customers. Secondly, the desired level of product quality is not guaranteed when working with independent firms. Thirdly, independent firms are often unable to raise sufficient capital thereby influencing negatively the effectiveness of the value chain. Finally, costs from independent firms are globally uncompetitive due to the low degree of local competition for some input products. On the other hand, the automotive industry in Kenya revealed four challenges that it encounters by practising a high level of vertical integration. These are high capital requirements, high fixed costs for operations, high degree management complexity and increased bureaucracies. The industry has therefore adopted vertical integration strategies that reflect a balance of the strategic benefits and strategic costs of vertical integration.

5.2 Limitations of the Study

While conducting this study, the researcher came across two main limitations. Some organizations were very sensitive about the information they gave and therefore did not give information that they considered confidential especially financial information. The total sales and the cost of sales data required for calculating the degree of vertical integration was not obtained from all the respondents. Secondly, there were new entrants in the market in 2006 e.g. FAW, FOTON that were not included in the study because the scope of the research required sales and financial data relating to the year to allow comparisons.

5.3 Suggestions for Further Research

In concluding this study, the researcher recommends that future researchers to gear their efforts in establishing if there exists any relationship between any of the four dimensions of vertical integration discussed and business variables both internal and external. It would be of interest to establish the correlation between a particular dimension of vertical integration and business variables such as volatility of competition, corporate strategy, industry growth, market share et cetera. The researcher also noted that the industry practises horizontal integration strategies widely. Some firms offer more than one product to compete in the same segment of the market. Horizontal integration strategies in this industry should therefore be studied to understand their impact on business performance and to establish the challenges associated with these strategies.

5.4 Recommendations for Policy and Practise

The findings of this study indicate that the motor vehicle industry in Kenya has by and large avoided integrating backwards sighting poor economies of scale as the justification. The Kenyan economy has displayed a bullish growth rate over the last five years that is likely to continue over the next decade. There is therefore a lot of potential for the motor industry market size to grow steadily as the economy continues to grow. Investors should therefore position themselves to tap into the business opportunity of local manufacture of vehicle components since the business case will tilt to favour higher levels of backward integration when vehicle market grows.

The research findings also noted the industry makes the majority of its sales through the distribution outlets that it owns and controls. Quasi integration through contracts has not been very effective and the industry must develop strategies that address the cause of the ineffectiveness. The development of the independent distribution networks ought to rank high in the industries strategic priorities. The research findings suggest that most customers would rather buy from the main franchise holder rather than his appointed distributors. This implies that the coverage of the market is not effective as the franchise owners had designed. The franchise owner that will streamline the delivery standards across his entire distribution network will have a definite competitive advantage in this industry.

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Note: American Psychological Association (APA) style of referencing

APPENDICES

Appendix 1: Research Questionnaire

SECTION A: Background Information

1. Organisation Name: _____
2. Product(s) brand name: _____

3. Ownership structure: _____

4. Mission Statement

5. Vision statement

6. Number of years in operation in Kenya: _____
7. Market share in 2006: _____

SECTION B: The Dimension Vertical Integration Practiced

8. What proportion of your inputs does your business unit obtain from an upstream business unit that you own?
- a. No inputs from sister units ()
 - b. Between 0% and 80% of inputs purchased from sister units ()
 - c. More than 80% of inputs purchased from sister units ()
9. What percentage of outputs does your firm sell to (or through) a business unit that you own?
- d. No sales to (or through) a sister unit ()
 - e. Between 0% and 80% of outputs sold to(or through) sister units ()
 - f. More than 80% of outputs sold to(or through) sister units ()
10. Which of the following activities are conducted by your business unit? (tick where applicable)

Technological development

- Vehicle design
- Component design
- Vehicle Body design
- Product development (R&D)
- Vehicle redesign
- Process design

Inbound logistics

- Material handling
- Storage of inputs

Operations

- Components fabrication
- Body assembly
- Paint operations

Trim and Chassis assembly

Vehicle testing

Body building

Jig and fixture fabrication

Outbound logistics

Storage of finished products

Distribution to dealers

Distribution to customers

Human resource management

Recruiting

Development

Payroll

HR department

Marketing and Sales

Sales administration

Advertising

Promotions

Selling

Marketing research

Distribution outlets

Service

Vehicle repairs

Service training

Spare parts manufacture

Spare parts sales

Technical field support

Procurement

Supplier sourcing

Supplier development

Purchase order processing

Purchasing department

Firm infrastructure

General management

Planning management

- | | |
|--|---|
| <input type="checkbox"/> Legal department | <input type="checkbox"/> Fuel stations |
| <input type="checkbox"/> Accounting department | <input type="checkbox"/> Security systems |
| <input type="checkbox"/> Public relations | <input type="checkbox"/> Accessories |
| <input type="checkbox"/> Medical department | <input type="checkbox"/> Vehicle insurance |
| <input type="checkbox"/> Quality management | <input type="checkbox"/> Car wash |
| <input type="checkbox"/> Maintenance | <input type="checkbox"/> Valet parking |
| <input type="checkbox"/> Security | <input type="checkbox"/> Transport (public or Car hire) |
| <input type="checkbox"/> Cleaning | <input type="checkbox"/> Rescue services |
| Other Related diversification | <input type="checkbox"/> Vehicle purchase financing |
| <input type="checkbox"/> Fleet management system | <input type="checkbox"/> Leasing |

11. What is your firm's percentage of ownership in any of your suppliers or distributors?

- g. Contracts only (0% ownership)
- h. Quasi integration (less than 95% ownership)
- i. Wholly-owned (95% or more ownership)

12. Please indicate the Total sales and purchases from the 2006 financial year.

j. Total Sales _____

k. Cost of Sales _____

SECTION C: Challenges associated with Vertical Integration Strategies

13. What challenges does your business unit experience by owning your supplier or distributors business unit?

14. What challenges does the business unit experience by working with independent (outside) suppliers or distributors?

Appendix 2: Population elements: Motor vehicle franchise holders in Kenya

1. Toyota East Africa
2. Cooper Motor Corporation
3. General Motors East Africa
4. Simba Colt Motors
5. DT Dobie
6. Car & General
7. Kenya Grange Vehicle Industries
8. Marshalls East Africa
9. Subaru Kenya
10. Tata

Source: Kenya Motor Industry (2007)