Vertical Integration and Competitive Strategy of Dairy Processors: A Case of Githunguri Dairy Farmers Cooperative Society Limited

By:

Kwanya Julius Ochieng’

A Research Project Submitted in Partial Fulfilment of the Requirement for the Degree of Masters of Business Administration (MBA), School of Business, University of Nairobi

October 2008
DECLARATION

This Research Project is My Original Work and Has Not Been Presented for a Degree in Any Other University

Signed: ___________________________ Date 18/11/08

Kwanya Julius Ochieng' - D61/P/7105/04

This Research Proposal Has Been Submitted For Examination With My Approval As The University Supervisor.

Signed: ___________________________ Date: 14th Nov 2008

Dr. J. M. Munyoki,
Department of Business Administration
University of Nairobi.
DEDICATION

Special dedication to my family, and particularly my mother who has been the pillar and epitome of the family.
ACKNOWLEDGEMENT

Researching and doing the study of this magnitude requires collaboration and involvement of many people. I am appreciative of the countless number of people involved in this project who time after time put forth the extra effort necessary to accomplish the assignment.

In a special way, I would like to thank my supervisor, Dr. J. M. Munyoki, for his contribution and review of my work. I was stimulated and encouraged by his comments which I incorporated in the Paper. My thanks also go to, Mr. Jackson Maalu who moderated my work. I carefully and appreciated his suggestions which I incorporated in this Paper.

I would also like to thank my peers who have been with me since the days I started to pursue the Course. In particular, Solomon Odep was available for discussions and inspiration on the progress of the study. Carol and Nelly Kasina, who were my study team, encouraged me to complete the work in time.

Finally, I would like to acknowledge the support I received from my wife, Pauline and daughter Kayla for enduring the many hours and days I spent on the Project.
ABSTRACT

This study sought to find out the linkage between vertical integration and competitive strategy. It took the form of a case study of Githunguri Dairy Farmers Cooperative Society which is located about 50km from Nairobi in, Githunguri Division of Kiambu District in Central Province. Githunguri Dairy Farmers Cooperative Society Limited has pursued significant business growth by being involved in raw milk supply, milk transportation, milk processing and packaging as well as marketing and distribution of dairy products.

By use of an interview schedule, the researcher interviewed directors, managers and the supervisors of the Society for the purpose of collecting primary data. Desk review of existing literature was also carried out to aid in understanding what has been done in relation to linkage between vertical integration and competitive strategy. The collected qualitative data was analyzed using content analysis which was deemed appropriate, since the interviews conducted were open-ended and did not limit respondents on the answers. For quantitative data, graphs and tables have been used to summarize the data to facilitate comparisons. The analysis of the data was guided by variables such as improvement in raw milk collection, milk processing, sales revenue and market share in relation to increased competition and variations in the dairy value chain.

The study has established that Githunguri Dairy Farmers Cooperative Society (GDFCS) has integrated supply of raw milk with processing, transportation and distribution of dairy products. The integration has leveraged economies of scale thus providing linkage between vertical integration and the competitive strategy. The economies of scale and efficiency brought about by vertical integration translate to cost advantages which are then passed to the consumers. This forms the core around which the Society executes a cost leadership strategy. The Society’s cost advantage is built on its capability to process and distribute affordable and quality dairy products for the mass market, thus translating to growth in its market share.
# TABLE OF CONTENTS

**CHAPTER ONE: INTRODUCTION**

1.1 BACKGROUND

1.1.1 THE CONCEPT OF VERTICAL INTEGRATION AND COMPETITIVE STRATEGY

1.1.2 DAIRY VALUE CHAIN

1.1.3 HISTORY OF DAIRY PROCESSORS IN KENYA

1.1.4 GITHUNGURI DAIRY FARMERS COOPERATIVE SOCIETY

1.2 STATEMENT OF THE PROBLEM

1.3 RESEARCH OBJECTIVES

1.4 IMPORTANCE OF THE STUDY

1.5 SCOPE OF STUDY

**CHAPTER TWO: LITERATURE REVIEW**

2.1 INTRODUCTION

2.2 VERTICAL INTEGRATION AND COMPETITIVE STRATEGY

2.2.1 VERTICAL INTEGRATION

2.2.2 COMPETITIVE STRATEGY

2.3 VERTICAL INTEGRATION, COMPETITIVE STRATEGY AND PERFORMANCE

**CHAPTER THREE: RESEARCH METHODOLOGY**

3.1 RESEARCH DESIGN

3.2 DATA COLLECTION

**CHAPTER FOUR: DATA ANALYSIS AND INTERPRETATION**

4.1 INTRODUCTION

4.2 PROFILE OF GITHUNGURI DAIRY FARMERS COOPERATIVE SOCIETY

4.3 THE EXTENT OF VERTICAL INTEGRATION AND COMPETITIVE STRATEGY

4.4 LINKAGE BETWEEN VERTICAL INTEGRATION AND COMPETITIVE STRATEGY
LIST OF TABLES

Table 1.1: Projected Milk Production and Consumption in Kenya (Million Litres) .......... 4
Table 1.2: Milk Intake Summary in the Formal Sector in Litres (2001 - 2006) ............. 6
Table 1.3: Milk Intake at GDFCS in Litres (2005 - 2007) ........................................ 6
Table 2.1: Criteria for Integration Decisions ............................................................... 11
Table 4.1: Perception of Strategic Approach ............................................................... 27
Table 4.2: Factors Responsible for Evolution of GDFCS’s Competitive Strategies .... 28
Table 4.3: Milk Intake By Processors Versus GDFCS (Kgs) ...................................... 29
Table 4.4: Key Performance Indicators ........................................................................ 31
Table 4.5: Milk Intake from Farmers (Kgs) ................................................................. 32
Table 4.6: Intake Received by Plant (Kgs) ................................................................. 33
Table 4.7: Sales of Processed Dairy Products ............................................................. 34
<table>
<thead>
<tr>
<th>ACRONYMS AND ABBREVIATIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPCS</td>
</tr>
<tr>
<td>CSR</td>
</tr>
<tr>
<td>FMCG</td>
</tr>
<tr>
<td>GDFCS</td>
</tr>
<tr>
<td>KARI</td>
</tr>
<tr>
<td>KDB</td>
</tr>
<tr>
<td>KCC</td>
</tr>
<tr>
<td>Kgs</td>
</tr>
<tr>
<td>MOA</td>
</tr>
<tr>
<td>ILRI</td>
</tr>
<tr>
<td>Society</td>
</tr>
<tr>
<td>SCC</td>
</tr>
</tbody>
</table>
CHAPTER ONE: INTRODUCTION

1.1 Background

1.1.1 The Concept of Vertical Integration and Competitive Strategy

Vertical integration refers to the process in which several steps in the production and/or distribution of a product or service are controlled by a single company or entity, in order to increase that company's or entity's power in the marketplace. Vertically integrating, forward or backward, makes strategic sense only if it strengthens a company's position via either cost reduction or creation of a differentiation-based advantage (Johnson et al, 2007). However, the drawbacks of vertical integration including increased investment, greater business risk, increased vulnerability to technological changes and less flexibility in making product changes should be weighed against the advantages. The best reasons for investing company resources in vertical integration are to strengthen a firm's competitive position and subsequently boost its profitability.

Competitive strategy deals with the specifics of management’s game plan for competing successfully and securing a competitive advantage over rivals. Bearden et al (2001) states that competitive strategies have been described as being arrayed on a continuum labeled the competitive strategy-positioning continuum. This continuum is anchored by low-cost leadership on one end and differentiation on the other end. A sound business strategy has to consider cost structure. Whether a firm uses an expansion-oriented strategy or a low-cost strategy, understanding where costs stack up in relation to the peers is a must. The cost of production often determines the ultimate sustainability of all these endeavors.

1.1.2 Dairy Value Chain

The dairy value chain starts with the raw product/milk supply at the farm level and ends with consumers who make the choice to buy, or not to buy, the finished product.
Consumers are the primary source of the economic value of the chain and its links. Consumers determine when and how they want dairy products. The dairy value chain links between the farm and the consumer include raw milk procurement, transportation, processing, storage, conversion packaging, distribution, retailing, and food services.

The critical links in the dairy value chain must function as an effective system to support a viable industry. Dairy farmers, milk processors and others in the chain always employ competitive strategies not only meant to control the market but also to ensure maximize returns on their investments. Essentially overall health of dairy value chain is only as strong as its individual parts. If one sector is hurting, the rest of the system will also be negatively affected.

1.1.3 History of Dairy Processors in Kenya

According to Kenya Dairy Board, Kenya’s agricultural polices have been changing over the years as stipulated in the various national Development Plans and Sessional Papers. Common themes in Kenya’s agricultural policy have included increased food supply, security and self sufficiency, growth in agricultural employment, expansion in exports, resource conservation and poverty eradication. The release of the Swynnerton Plan in 1954 was a significant policy change that permitted indigenous Kenyan’s to engage in commercial dairy farming and strengthened marketing of farm produce by small scale farmers.

These efforts saw the emergence of cooperatives and other agencies for the marketing of agricultural produce. The Dairy Industry Act was enacted in 1958 mainly to protect market interests of the then expanding large scale commercial dairy enterprises besides the need for a statutory body to enable continued and orderly marketing of dairy produce of improved quality. The dairy produce market was segregated into scheduled (urban or formal) and non-scheduled (rural or informal) categories with Kenya Co-operative Creameries (K.C.C.) being appointed as the sole agent of Kenya Dairy Board to carry out the marketing of dairy produce in scheduled areas.
Statistics available from Kenya Dairy Board’s website says that Kenya has 34 active milk processors with an installed daily processing capacity of 2.9 million litres. The industry has invested in modern milk processing plants to ensure quality and efficiency. These processors produce a wide range of products namely Fresh Milk, Yoghurt, Mala, Ice Cream, Cheese, UHT, Powder Milk, Butter, and Ghee. In terms of market share the top four key processors are New KCC Limited, Brookside Dairy Limited, Spinknit (Tuzo) Dairy Limited and Githunguri Dairy Farmers Cooperative Society Limited.

Kenya Dairy Board’s projected milk production against consumption in Kenya depicts self-sufficiency in milk production. As summarized in Table 1.1, the country’s annual milk surplus ranges from 354 million to 837 million litres.

Table 1.1: Projected Milk Production and Consumption in Kenya (Million Litres)

<table>
<thead>
<tr>
<th>Year</th>
<th>Projected Milk Production</th>
<th>Projected Milk Consumption</th>
<th>Projected Surplus Milk</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004</td>
<td>3,323</td>
<td>2,969</td>
<td>354</td>
</tr>
<tr>
<td>2005</td>
<td>3,455</td>
<td>3,058</td>
<td>397</td>
</tr>
<tr>
<td>2006</td>
<td>3,593</td>
<td>3,149</td>
<td>444</td>
</tr>
<tr>
<td>2007</td>
<td>3,736</td>
<td>3,244</td>
<td>492</td>
</tr>
<tr>
<td>2008</td>
<td>3,885</td>
<td>3,341</td>
<td>544</td>
</tr>
<tr>
<td>2009</td>
<td>4,040</td>
<td>3,441</td>
<td>599</td>
</tr>
<tr>
<td>2010</td>
<td>4,201</td>
<td>3,545</td>
<td>656</td>
</tr>
<tr>
<td>2011</td>
<td>4,369</td>
<td>3,686</td>
<td>683</td>
</tr>
<tr>
<td>2012</td>
<td>4,565</td>
<td>3,834</td>
<td>731</td>
</tr>
<tr>
<td>2013</td>
<td>4,771</td>
<td>3,987</td>
<td>784</td>
</tr>
<tr>
<td>2014</td>
<td>4,984</td>
<td>4,147</td>
<td>837</td>
</tr>
</tbody>
</table>

Source: Kenya Dairy Board
From Table 1.1, milk production grows at an average of 4% while consumption levels rise at an average rate of 3% annually, resulting in marginal increase in milk surplus. This explains why some milk processors have made forays in export.

1.1.4 Githunguri Dairy Farmers Cooperative Society

A review of the Corporate Profile of Githunguri Dairy Farmers Co-operative Society (GDFCS) and interviews with management indicate that it was formed way back in August 1961, with only 31 members. It was registered under the Co-operative Societies’ Ordinance of 1945 and co-operative rules of 1946.

In 1964, the then Minister for Agriculture, Mr. Bruce Mackenzie opened Kambaa centre (route 2). This influenced more farmers to join and the Society. In 1968, UNICEF provided the society with milk coolers to enable them collect milk in the evening and store it till the next morning. The equipments were paid for through giving skimmed milk to nearby nursery school children. By 1965, they had managed to sell to KCC, 4,275 litres of milk per day.

Profiling the Society in the Strategic Plan 2005/6 – 2009/10, the Management states that in 1975 Kiambu Dairy and Pyrethrum Farmers Union of which the Society is an affiliate opened a banking section in Githunguri town. All members’ accounts were transferred to this bank to facilitate payments and assist members obtain cheap financing. They started CPCS (Crop Produce Credit Scheme) loans and societies were allocated funds to grant to their farmers for the improvement of their dairy farming. Milk intake increased tremendously as more farmers joined the society.

The Society opened a Milk Processing Plant in 2004 to process and package dairy products in form of pouch packed fresh milk, butter, yoghurt, ghee and cream under the flagship of “Fresha Dairy Products”. The Society has commanded a market share of about 8% to 10% of milk intake from 2005 to 2007. The percentage is arrived at by comparing Kenya Dairy Board’s statistics on processed milk against the Society’s
recorded performance in the annual reports. The statistics obtained from Kenya Dairy Board and GDFCS respectively are presented in Tables 1.2 and 1.3.

Table 1.2: Milk Intake Summary in the Formal Sector in Litres (2001 – 2006)

<table>
<thead>
<tr>
<th>Year</th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
</tr>
</thead>
<tbody>
<tr>
<td>Processed Milk in Million Litres</td>
<td>152.3</td>
<td>143.5</td>
<td>197.3</td>
<td>274.0</td>
<td>339.5</td>
<td>360.1</td>
</tr>
</tbody>
</table>

Source: Kenya Dairy Board

Table 1.3: Milk Intake at GDFCS in Litres (2005 – 2007)

<table>
<thead>
<tr>
<th>Year</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>Processed Milk in Million Litres</td>
<td>26.9</td>
<td>35.3</td>
<td>36.4</td>
</tr>
</tbody>
</table>

Source: GDFCS Annual Reports

The Society is mandated by the By-Laws to process, grade, pack, transport, market and all such other operations as may be necessary for the most profitable disposal of the members produce whether agricultural, industrial or otherwise. Secondly it authorizes the Society to purchase and re-sale of materials, machinery and other requirement of members provided that the Society may carry out such activities with non-members on such terms and conditions as agreed upon by members at a general meeting.

The Society is also expected not only to promote cooperation and goodwill between members and the Society but also with other co-operatives in order to promote members’ interest. In furtherance of this objective, the Society may affiliate to secondary co-operatives (Co-operative Unions), National Cooperative Organizations and Kenya Federation of Cooperatives.

Strategically, the Society has been in the business of processing and marketing of milk and milk products for purposes of securing a strong position in the dairy products market. From the Society’s records it has workforce of 382 employees in all its activities and a
membership of 12,000 members. It is the biggest and among the best managed Cooperative Societies in the country.

1.2 Statement of the Problem

Zadek S. et al (2005) posits that a company's material wealth is dependent on its productivity. Historically, classical economists associated this purely with land, hardly surprising in the period before the industrial revolution of many now mature economies. Much of late nineteenth century economics focused on the role of labour in wealth creation. Twentieth century economics extended our understanding of productivity to embrace many factors of production, notably capital. As the last millennium came to a close, increasing emphasis was being placed on technology as the key source of productivity growth and competitiveness. Competitiveness, we learned, was to do with comparative advantage, or what each company does better than others. Most recently, the conceptual landscape has shifted once again, and the importance of local conditions has been stressed, the remaining sources of difference, and through this the crucial roles played by institutional robustness, flexibility and innovation.

Githunguri Dairy Farmers Cooperative Society's competitive strategy has evolved in response to changes in the socio-economic environment, mirroring the experience and lessons from company-level responsible business tactics and practices.

A related collaborative research by Kenya Agricultural Research Institute (KARI), Ministry of Agriculture (MoA) and International Livestock Research Institute (ILRI) in 1998 examined a wide range of levels of dairy productivity potential and market access within the Nairobi milk-shed, covering Githunguri catchment area. While the collaborative study assessed the link between the level of intensification and competitiveness, the researcher focused on the linkage between vertical integration and competitive strategy. The collaborative study describes the wide variability of production strategies present in a relatively small area, and growing competitiveness of less intensive dairy production.
Obiero (2006) conducted a survey on the extent of vertical integration in Asian vegetables exporting businesses in Kenya. He mainly focused the extent of vertical integration and therefore he did not explore the linkage between vertical integration and competitive strategy. Apart from Mahaga (2003) who has done a study of vertical integration and performance of food manufacturing firms in Nairobi, no known research study has been done on the relationship between vertical integration and competitive strategy of a dairy processing firm. This study, therefore, examined the linkage between vertical integration and competitive strategy of Githunguri Dairy Farmers Cooperative Society (GDFCS).

1.3 Research Objectives

Competitive strategy is increasingly a product of the human, not nature’s, hand. This has always been true in principle and practice as economic value is increasingly rooted in intangible assets like intellectual capital, brands, people’s commitment, creativity and relationships.

The objectives of the study were:

i. To find out the extent to which Githunguri Dairy Farmers Cooperative Society use vertical integration.

ii. To find out the linkage between vertical integration and competitive strategy of Githunguri Dairy Farmers Cooperative Society (GDFCS)

iii. To find out if the linkage between vertical integration and competitive strategy has led to improved performance.

1.4 Importance of the Study

This study has fundamentally build understanding on why companies vertically integrate as they expand or when faced with intense competition. Similar studies have been
undertaken (Kariuki, 2006) but no clear linkage between vertical integration and competitive strategy was established.

The study has contributed to the knowledge of scholars interested in the relationship between vertical integration and competitive strategy for a fast moving consumer goods (FMCG) producer. It is also important to GDFCS for future reference on its process of vertical integration to enhance its competitiveness. Further the study is important to the private sector (in particular milk processors) that operates in a highly competitive environment.

The study is also a great inspiration to researchers to investigate the link between vertical integration and competitive strategy to learn and contribute to the body of knowledge in the field.

1.5 Scope of the Study

The study specifically focused on Githunguri Dairy Farmers Cooperative Society (GDFCS) Limited which is located about 50km from Nairobi in, Githunguri Division of Kiambu District in Central Province.
CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

The chapter reviews various contributions on vertical integration, competitive strategy and performance. It discusses vertical integration as a way of enhancing competitiveness and also builds an understanding on what competitive strategy is all about and its relevance in business enterprises. Still the review duels on vertical integration, competitive strategy and performance by exploring the rationale for a study to establish the linkage between vertical integration and competitive strategy.

2.2 Vertical Integration and Competitive Strategy

2.2.1 Vertical Integration

Vertical integration is simply a means of coordinating different stages of an industry chain. Pearce and Robinson (1997) depict vertical integration as a situation where firms remain within the industry but perform additional functions thus enabling firms to reduce risk by reducing uncertainty about input or access to customers. It typically reduces some risks but requires heavy set up costs and coordination effectiveness.

Rehber (1998) outlines that vertical integration strategy includes tapered integration, quasi integration and full vertical integration and that one of the worldwide ways of achieving vertical integration strategy in agribusiness is through different modes of contracts falling under quasi vertical integration. Wolf et al (2002) affirms that as a response to industrialization, vertical integration is increasingly coordinating modern supply chains. The exact forms of corporate governance that support such arrangement, however, vary widely according to situation specific variables.

Stuckey and White (1993) list the kind of costs, risks and coordination issues that should be weighted in the integration decision. Clearly planned interplay of key factors in
vertical integration as shown in Table 2.1 may reduce some risks and costs when a firm embarks on integration process.

Table 2.1: Criteria for Integration Decisions

<table>
<thead>
<tr>
<th>Setup Costs</th>
<th>Transaction Costs</th>
<th>Transaction Risks</th>
<th>Coordination Effectiveness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capital (Equipment, Acquisitions)</td>
<td>Information</td>
<td>Possibilities of Unreasonable Price Changes</td>
<td>Run Lengths, Inventory Levels</td>
</tr>
<tr>
<td></td>
<td>Collection and Processing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Systems Development</td>
<td>Legal</td>
<td>Supply or Outlet Foreclosure</td>
<td>Capacity Utilization</td>
</tr>
<tr>
<td></td>
<td>Sales and Purchasing</td>
<td>Insulation from Market e.g. from Technical Changes, New Products.</td>
<td>Delivery Performance</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Quality</td>
</tr>
</tbody>
</table>

Source: Mckinsey Quarterly: When and When Not to Vertically Integrate (2003)

For any vertical integration decision to make business sense costs pertaining to equipment acquisition, systems development, training and other transactions has to be weighted against the risks involved with an eye on the expected benefits.

Stuckey and White (2003) went further to identify four reasons for integration. First, if the market is too risky and reliable. Secondly, a company may integrate if companies in the adjacent stages of the industry chain have more market power than those in its stage. Integration would also create or exploit market power by raising barriers to entry or allowing price discrimination across customer segments. In a young market a company may forward integrate to develop a market in the adjacent stages.

According to Zook and Allen (2003), sustained and profitable growth comes when a company pushes out of the boundaries of its core business into adjacent space. The
adjacencies range from adjacent links in the value chain to adjacent customers to adjacent geographies. Secondly companies profitably outgrow rivals by developing boundaries in predictable and repeatable ways. Porter (1998) clarifies that some economies of integration could be gained by the right type of long-term or even short-term contracts between independent firms, and Charles and Gareth (2001) concur and mention that there exist alternatives to vertical integration that may provide some of the same benefits with fewer drawbacks and these include strategic alliances and long-term contracting whereby the buying company and the supplying company agree to jointly seek ways of lowering costs and increasing quality of the firm's inputs. Strategic outsourcing is also another option.

2.2.2 Competitive Strategy

Strategy entered the management literature as a way of referring to what one did to counter a competitor's actual or predicted moves (Steiner, 1979). Mintzberg (1994) points out that people use strategy in several different ways, the most common being that strategy is a plan, a means of getting from here to there. Strategy is also a pattern in actions over time; for example, a company that regularly markets very expensive products is using a high end strategy.

Strategy is position; that is, it reflects decisions to offer particular products or services in particular markets. Strategy is perspective, that is, vision and direction (Mintzberg, 1994). He argues that strategy emerges over time as intentions collide with and accommodate a changing reality. Thus, one might start with a perspective and conclude that it calls for a certain position, which is to be achieved by way of a carefully crafted plan, with the eventual outcome and strategy reflected in a pattern evident in decisions and actions over time. This pattern in decisions and actions defines what is called realized or emergent strategy.

Andrew (1980) states that strategy is the pattern of decisions in a company that determines and reveals its objectives, purposes, or goals and produces the principal
policies and plans for achieving those goals. Strategy defines the range of business the company is to pursue, the kind of economic and human organization it is or intends to be, and the nature of the economic and non-economic contribution it intends to make to its shareholders, employees, customers, and communities.

Andrew’s definition obviously anticipates Mintzberg’s attention to pattern, plan, and perspective. Andrew (1980) also draws a distinction between corporate strategy, which determines the businesses in which a company will compete, and business strategy, which defines the basis of competition for a given business. Thus, he also anticipated position as a form of strategy.

According to Ansoff and McDonnel (1990) strategy is a set of decision making rules for guidance of organization behaviour. The four distinct types of such rules include yardstick by which the present and future performance of the firm is measured, that is the objectives and goals. There is also rule for developing the firm’s relationship with its external environment: what product-technology the firm will develop, where to whom the products to be sold, how will the firm gain advantage over competitors (business strategy). Organizational concept rule concerns with establishment of internal relations and processes within the organization while operational policies are rules by which a firm conducts its day-to-day business.

Strategy is the framework which guides choices that determine the nature and direction of an organization (Tregoe and Zimmerman, 1980). Ultimately, this boils down to selecting products or services to offer and the markets in which to offer them. They urge executives to base their decisions on a single driving force of the business. So it seems they take the position that strategy is essentially a matter of perspective.

Robert (1993) takes a similar view of strategy when he argues that the real issues are strategic management and thinking strategically. This boils down to decisions pertaining to four factors products and services, market segments, customers and geographic areas. Like Tregoe and Zimmerman, Robert claims that decisions about which products and
services to offer, the customers to be served, the market segments in which to operate, and the geographic areas of operations should be made on the basis of a single driving force.

Strategy therefore represents a management commitment to pursue a particular set of actions in growing the business, attracting customers, competing successfully and improving the company’s financial and market performance. Changing circumstances and ongoing management efforts to improve on performance often causes Companies’ strategy to evolve over time.

Strategy exists at several levels in any organization with the corporate strategy being concerned with the overall purpose and scope of the business to meet stakeholders’ expectation (Des et al, 2005). It entails specifying overall objectives, developing policies and plans to achieve the objectives and allocating resources so as to implement the plans. On the other hand business unit strategy focuses more on how a business competes successfully in a particular market while for operational strategy attention is directed towards addressing how each part of the business is organized to deliver to the corporate and business-unit level strategic direction.

The notion of restricting the basis on which strategy might be formulated has been carried one step farther by Treacy and Wiersema (1993) by asserting that companies achieve leadership positions by narrowing, not broadening their business focus. Treacy and Wiersema identify three value-disciplines that can serve as the basis for competitive strategy: operational excellence, customer intimacy, and product leadership. The value disciplines entail operational excellence - strategy is predicated on the production and delivery of products and services. The objective is to lead the industry in terms of price and convenience.

On one hand customer intimacy value discipline view strategy as predicated on tailoring and shaping products and services to fit an increasingly fine definition of the customer. The objective is long-term customer loyalty and long-term customer
profitability. Meanwhile product leadership value discipline is predicated on producing a continuous stream of state-of-the-art products and services. The objective is the quick commercialization of new ideas.

Each of the three value disciplines suggests different requirements. Operational Excellence implies world-class marketing, manufacturing, and distribution processes. Customer Intimacy suggests staying close to the customer and entails long-term relationships. Product Leadership clearly hinges on market-focused research and development as well as organizational nimbleness and agility. Porter (1986) argues that competitive strategy is about being different. He adds that it means deliberately choosing a different set of activities to deliver a unique mix of value. Essentially, Porter (1996) argues that strategy is about competitive position, about differentiating yourself in the eyes of the customer, about adding value through a mix of activities different from those used by competitors.

Porter (1980) has described a category scheme consisting of three general types of strategies that are commonly used by businesses to achieve and maintain competitive advantage. These three generic strategies are cost leadership, differentiation and market segmentation (focus) strategies. Cost leadership strategy emphasizes efficiency. By producing high volumes of standardized products, the firm hopes to take advantage of economies of scale and experience curve effects. The product is often a basic no-frills product that is produced at a relatively low cost and made available to a very large customer base. Maintaining this strategy requires a continuous search for cost reductions in all aspects of the business.

Differentiation is aimed at the broad market that involves the creation of a product or services that is perceived throughout its industry as unique. The company or business unit may then charge a premium for its product. This specialty can be associated with design, brand image, technology, features, dealers, network, or customer service. Differentiation is a viable strategy for earning above average returns in a specific business because the
resulting brand loyalty lowers customers' sensitivity to price. Increased costs can usually be passed on to the buyers.

In market segmentation strategy the firm concentrates on a select few target markets. It is also called a focus strategy or niche strategy. It is hoped that by focusing your marketing efforts on one or two narrow market segments and tailoring your marketing mix to these specialized markets, you can better meet the needs of that target market. The firm typically looks to gain a competitive advantage through effectiveness rather than efficiency. It is most suitable for relatively small firms but can be used by any company.

Besides, Porter seems to embrace competitive strategy as both plan and position as he defines competitive strategy as a combination of the ends (goals) for which the firm is striving and the means (policies) by which it is seeking to get there. Porter also reaffirms in a January 2008 Harvard Business Review article that the five forces that shape competitive strategy are threat of new entrants, rivalry among existing competitors, threat of substitute products or services, bargaining power of suppliers and bargaining power of buyers.

Understanding the competitive forces and their underlying causes reveals the roots of an industry's profitability while providing a framework for anticipating and influencing competition and profitability over time. Porter asserts that the strongest competitive force or forces determine the profitability of an industry and become the most important to strategy formulation and positioning.

According to Kaplan and Norton (2004) an organization's strategy describes how it intends to create value for its shareholders, customers and citizens. For instance if an organization's intangible assets represent more than 75% of its value, then its strategy formulation and execution need to explicitly address the mobilization and alignment of intangible assets.
In the Balanced Scorecard framework Kaplan and Norton (2004) describe strategies for creating value. The framework's important elements include financial performance as one way of determining an organization's success. Strategy describes how an organization intends to create sustainable growth in shareholder value. Success with targeted customers provides a principal component for improved financial performance. In addition to measuring the outcome indicators of customer success, such as satisfaction, retention and growth, the customer perspective defines the value proposition for targeted customer segments. Choosing the customer value proposition is the central element of strategy.

Internal processes create and deliver the value proposition for customers. The performance of internal processes is a leading indicator of subsequent improvements in customer and financial outcomes. Intangible assets are the ultimate source of sustainable value creation. Learning and growth objectives describe how the people, technology and organization climate combine to support the strategy. Improvements in learning and growth measures are lead indicators for internal process, customer, and financial performance. Objectives in the four perspectives link together in a chain of cause-and-effect relationships. Enhancing and aligning intangible assets lead to improved process performance, which, in turn, drives success for customers and shareholders.

2.3 Vertical Integration, Competitive Strategy and Performance

Walker (2004) observes that decisions regarding a firm's boundary can be critical to a firm's strategy and economic performance. Vertical integration allows for greater control over how activities are designed and executed. The control allows a firm to integrate so that the process supply of raw materials, production and marketing can be streamlined with extremely low inventory.

Vertical integration as a strategy is favored in instances where there exist major obstacles to formulation and monitoring of contracts which may be due to lack of necessary management skills or resources and as a result vertical integration would then ensure the
quality and reliability of either the inputs and/or the distribution channels (Obiero, 2006). Vertical integration may also be preferred in situations where the production quantities involved in the vertical integration activities are of such quantities that may result in economies of scale, hence resulting in cost effectiveness and competitive advantage. Another favoring factor relates to the number of companies in the vertically related activity in that the fewer companies the greater the possibility of vertical integration so as to create barriers for other firms keen to access the activity.

The kind of activities, a business decides to undertake, are directly linked to achieving a competitive advantage. For example, a business which wishes to outperform its competitors through differentiating itself through higher quality will have to perform its value chain activities better than the opposition. By contrast, a strategy based on seeking cost leadership will require a reduction in the costs associated with the value chain activities, or a reduction in the total amount of resources used.

Stephen (1986) draws attention to the factors that favor vertical integration by observing that at times firms require their suppliers to invest in expensive equipments that are specialized to manufacture components that are unique to their production process and since the parts are specific to one customer, the input production firm may be reluctant to make this investment and ask the buyer to make the investment; however the buyer may be reluctant to lock themselves with one supplier and may instead opt for vertical integration in the particular input production process stage. Government policies and regulations that contribute to high transaction costs either in the process of acquisition of inputs and distribution of outputs may also make a firm prefer vertical integration if it lowers these transaction costs.

However Porter (1996) cautions that where the core competencies required for the new activities are significantly different, then vertical integration within the industry will be discouraged because it would take time and financial resources to build the competencies required in the new activities and in the process the firm may loose out to a competitor. Besides, since vertical integration achieves consistency in operation as well as certainty
in production, great uncertainty in demand could lead to either under utilization of the facilities or overproduction, and both are costly to a firm hence uncertainty of demand is a deterrent to vertical integration.

Thompson et al (2007) postulate that vertical integration extends a firm’s competitive and operating scope within the same industry. It involves expanding the firm’s range of activities backward into sources of supply and/or forward to end users. Vertical integration strategies can aim at full integration (participating in all stages of the industry value chain) or partial integration (building positions in selected stages of the industry’s total value chain). They have gone further to state that vertical integration strategy has appeal only if it significantly strengthens the firm’s competitive position. The two best reasons for investing company resources in vertical integration are to strengthen the firm’s competitive position and/or boost its profitability.

Thompson et al (2007) document five variations in the competitive strategies that companies employ, mainly because each company’s strategic approach entails customer-designed actions to fit its own circumstances and industry environment. Low-Cost Provider Strategy strives to achieve lower overall costs than rivals and appealing to broader spectrum of customers usually by under-pricing rivals while Broad Differentiation Strategy seeks to differentiate the Company’s product offering from rivals in ways that will appeal to broader spectrum of buyers;

Best Cost Provider Strategy gives customers more value for their money by incorporating good-to-excellent product attributes at a lower cost than rivals; the target is to have the lowest (best) costs and prices compared to rivals offering products with comparable attributes. A Focused (Market Niche) Strategy Based on Low Costs concentrates on a narrow buyer segment and out-competing rivals by having lower costs than rivals and thus being able to serve the niche members at a lower price. However, Focused (Market Niche) Strategy Based on Differentiation concentrates on a narrow buyer segment and out-competing rivals by offering niche members customized attributes that meet their tastes and requirements better than rivals’ products.
Each of these five generic competitive approaches stakes out a different market position. Each involves distinctively different approaches to competing and operating business.

Grant (1980) upholds that the choice of vertical arrangement with external suppliers/buyers whether spot market or long-term contracts or some form of strategic alliance critically depend on firm’s competitive strategy and its perception of its core competencies. It is therefore possible to see vertical arrangement among firms within the same industry and within the same company, different vertical relationship are likely in different activities.

In summary vertical integration refers to a situation where firms remain within the industry but perform additional functions within the supply chain thus enabling firms to reduce risk by reducing uncertainty about input or access to customers. Sustained and profitable growth comes when a company pushes out of the boundaries of its core business into adjacent space. The push to adjacent space is critical to a firm’s competitive strategy and economic performance. The rationale behind investing company resources in vertical integration includes strengthening a firm’s competitive position and improvement of its performance.
CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Research Design

The study adopted a case study design. Case study research excels at bringing understanding of a complex issue or object and can extend experience or add strength to what is already known through previous research. Case studies emphasize detailed contextual analysis of a limited number of events or conditions and their relationships. Social scientists, in particular, have made wide use of this qualitative research method to examine contemporary real-life situations and provide the basis for the application of ideas and extension of methods. Yin (2003) defines case study research method as an empirical inquiry that investigates a contemporary phenomenon within its real-life context. The researcher settled on this method as it enables intensive study of the linkage between vertical integration and competitive strategy of a leading marketer of dairy products and also to provide data not yet available.

3.2 Data Collection

Data was collected from the employees of Githunguri Dairy Farmers Cooperative Society represented by nine (9) Directors, sixteen (16) Management Staff and three hundred and sixty six (366) employees. Respondents were nine directors, sixteen managers and thirty-five supervisors drawn from respective departments (Production, Quality Assurance, Finance, Human Resources & Administration, Stores, Marketing and Extension Services).

The researcher reviewed secondary data through desk review of existing literature on GDFCS. Primary data was also collected through interviews and focused group discussions. The interview process and focused group discussions were moderated using interview schedule and discussion guides. The researcher administered research questions, explained and clarified difficult ones using various unstructured probing
tactics to allow vast and rich data to be collected. All in all the above methods provided the researcher with space for flexibility in data collection.
CHAPTER FOUR: DATA ANALYSIS AND INTERPRETATION

4.1 Introduction

The collected data was analyzed using content analysis because the study solicited data that was qualitative in nature and given that it was a case study where respondents were drawn from a single organization. Further this type of analysis was deemed appropriate, since the interviews conducted were open-ended and did not limit respondents on the answers.

To allow for comparison, the researcher has presented graphical displays of data in which graphs have been used to summarize the data to facilitate comparisons. Tabular description, in which tables of numbers summarize the data and summarized statistics have also been deployed to allow comparison. The analysis of the data was guided by variables such as improvement in raw milk collection, milk processing, sales revenue and market share in relation to increased competition and variations in the dairy value chain.

A total of sixty (60) respondents, consisting of nine directors, sixteen managers and 35 supervisors were interviewed for collection of primary data.

4.2 Profile of Githunguri Dairy Farmers Cooperative Society

Githunguri Dairy Farmers Cooperative Society (GDFCS) was registered in August 1961 with a membership of 31. The Society started with one collection centre, which have increased to 46 fully computerized to date. According to the respondents, the Society processes an average of 140,000 litres of milk per day and operates thirty seven (37) merchandising Stores selling animal feeds and household items. There are 12,646 registered members of The Society out of whom 6,720 are active (deliver milk to the Society). The members are the only suppliers of the raw milk for processing. The Society has a share capital of Kshs. 148,886,502 and annual turnover of about Kshs. 1.6 billions from milk sales.
In 2002, Githunguri Dairy Farmers Cooperative Society (GDFCS) partnered with Swedish Cooperative Centre (SCC) to acquire an internal capacity for proactive planning and self-control. In doing this, GDFCS has been using Organization Development paradigm as a means of enhancing efficiency and effectiveness. Organizational assessment facilitated by Swedish Cooperative Centre (SCC) was carried out, and a three-year (2003-2005) Strategic Plan was developed.

At the end of the three years, a participatory internal assessment was done and in order to build on the gains of the first plan, the directors and management team of the organization decided to undertake a long-range planning process. This resulted in the current five-year Strategic Plan that runs from financial year 2005/06 to 2009/10.

The Society’s vision is to be the producer of most preferred farm fresh dairy products in Kenya and beyond while the mission states “To increase the value of the members, employees and the customers by providing high quality farm fresh dairy products to the market” In doing this GDFCS Limited is guided by the following four perspectives learning and growth perspective (an environment that is supportive of organization change, innovation and growth) and internal process perspective (the strategic priorities for business and operational processes which create constituent and customer satisfaction). It is also guided by financial perspective (the resource allocation decisions impacting cost effective outcomes) and customer perspective (the strategy for creating value).

The Society processes and packages dairy products in form of pouch packed fresh milk, butter, yoghurt, ghee and cream under the flagship of “Fresha Dairy Products”. The products are mainly marketed and distributed in parts of Central Province and Nairobi and its environs.
4.3 The Extent of Vertical Integration

Strategic vertical relations exist in various forms ranging from full vertical integration to other forms of relationship that depict the extent of vertical integration. The relationships include contracts, spot markets, joint ventures and franchises that are incorporated under quasi and tampered integration.

As a proactive response to the rapidly changing socio-economic environment, the Management of Githunguri Dairy Farmers Cooperative Society Limited decided to pursue significant business growth by ring fencing raw milk supply, intensifying milk transportation, venturing in milk processing, and opening of new markets for valued added milk products. According to the Chairman, “the Society’s response to challenges was multi-faceted and continues to focus on procurement and collection of raw milk strictly from members of the Society, transportation, processing and packaging as well as marketing and distribution of processed dairy products. In line with the Board’s growth strategy, ‘Fresha’ brand was launched in March 2004”

The essence of formulating competitive strategy is relating a Company to its environment (Porter, 19980). Porter provides a broad framework for understanding why the Society made strategic adjustment in 2003 to re-organize the business along the supply chain to form three business units: Milk Collection and Extension Services, Transportation and Processing and Marketing of value-added dairy products.

Milk collection and extension services consist of activities, mostly extended to dairy farmers not only to ring fence them but also to increase yields per cow. The vertical relationship that exists between the Society and dairy farmers is a contract arrangement that binds the members to deliver milk to the Society. The activities here include artificial information services, training for dairy farmers on good animal husbandry, credit facilities by accessing animals’ feeds and household items on credit from the merchandising stores, milk collection and quality inspection.
The transportation cycle starts with collection of graded raw milk from collection centres and delivery the same to the Processing Plant. It also performs the function of transport and distribution of processed farm fresh dairy products in Nairobi and parts of Central province. The unit has in-house workshop for motor vehicles repair and maintenance.

The Society’s Processing Plant handles raw milk reception, processes and packages dairy products into pouch, tetrapak classic and bottles. The processed products are then marketed and distributed by the marketing department. The products are delivered to contracted wholesale distributors who subsequently sell to the retailers.

In essence, the Society participates and controls supply of raw milk from the farm, transports the milk to the Processing Plant, processes and packages the dairy products, controls the quality of the products, markets and delivers the products to wholesale distributors.

The respondents reported that the adjustment was made not only to meet evolving needs of the marketplace through value added products but also to separate core businesses from activities carrying unacceptable risks. They also said that the adjustment was aimed at developing non-core assets e.g. merchandizing stores and extension services into sustainable growing and profitable businesses, enhance value of members’ assets and improve on the Society’s overall profitability.

4.4 Linkage between Vertical Integration and Competitive Strategy

When the respondents were asked ‘which option – a collaborative approach or mandate from the corporate centre – best describes the approach used to formulate the Society’s strategies,’ the responses are shown in Table 4.1.
From the study, 89.9% of Board members and 81.3% of senior managers tend to perceive that the Society’s strategy development process is collaborative, while only 51.4% of the supervisors tend to see the process as the work of the corporate centre (directors and managers).

All the respondents confirmed that a team consisting of directors, managers, supervisors and some employees attended a five-day workshop to discuss the Strategic Plan. Forty-two people participated in the strategic planning workshop. On team formation, it was revealed that though all directors and managers were obliged to attend and participate at the planning workshop, some supervisors and employees were also selected to attend the workshop to represent special segments of the Society such as unionized employees and gender. Besides, all efforts were made to have inputs from every section prior to the Strategic Planning workshop.

### 4.4.1 Factors Responsible for Evolution of the Society’s Competitive Strategies

GDFCS’s competitive strategy has evolved incrementally from management’s on-going efforts to fine-tune pieces of the strategy and adjust certain strategy elements in response to unfolding events. In an endeavor to establish the basis for evolution of the Society’s
competitive strategies, the respondents were asked to describe factors that continuously influenced the strategic shift. Table 4.3 is an illustration of how respondents prioritized the factors responsible for evolution of the Society’s competitive strategies.

Table 4.2: Factors Responsible for Evolution of GDFCS’s Competitive Strategies

<table>
<thead>
<tr>
<th>FACTORS</th>
<th>NUMBER OF RESPONDENTS WHO RANKED THE FACTOR TOP PRIOTY</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Directors</td>
<td>Managers</td>
</tr>
<tr>
<td>Control of Raw Milk Supply</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Response to Customer Needs</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td>Value Addition</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Efficient Resource Utilization</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Spreading Risks</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Enhance Value of Assets and Profitability</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Develop of Non-Core Activities</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td>TOTAL</td>
<td>9</td>
<td>16</td>
</tr>
</tbody>
</table>

Table 4.2 depicts response to customers' needs and value addition were the main factors that influenced the Society's competitive strategy. The other factors, in order of priority, include control of raw milk supply, efficient resource utilization, spreading risks, development of non-core activities and enhancing of value of assets and profitability. It is important to note that profitability is lowly ranked partly because the Society’s core mandate is the welfare of the community.
4.4.2 Vertical Integration and Competitive Strategy

In 2002 and 2003 the Society’s annual raw milk intake used to average 136 million kgs which translated to a monthly intake of 1,133,333 kgs which was then sold to processors. Effectively the Society had no presence in the processed milk market which manifested itself in low absorption capacity of raw milk. But the Society’s recorded significant increase in raw milk intake in 2005 and 2006 due to its integrated processing capability. Table 4.3 demonstrates instant and significant penetration of processed dairy products’ market by GDFCS in a span of one year after venturing into processing. In a market with over thirty players, it was a significant milestone to scale the heights and command an average of 8% of the market share during the first full year of processing dairy products.

Table 4.3: Milk Intake By Processors Versus GDFCS (Kgs)

<table>
<thead>
<tr>
<th>Month</th>
<th>Processors 2005</th>
<th>GDFCS</th>
<th>% of GDFCS</th>
<th>Processors 2006</th>
<th>GDFCS</th>
<th>% of GDFCS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jan</td>
<td>25,843,184</td>
<td>2,012,800</td>
<td>8</td>
<td>28,993,210</td>
<td>2,617,507</td>
<td>9</td>
</tr>
<tr>
<td>Feb</td>
<td>25,233,962</td>
<td>1,888,459</td>
<td>7</td>
<td>25,445,275</td>
<td>2,446,202</td>
<td>10</td>
</tr>
<tr>
<td>Mar</td>
<td>24,245,260</td>
<td>2,204,764</td>
<td>9</td>
<td>21,142,657</td>
<td>2,837,418</td>
<td>13</td>
</tr>
<tr>
<td>Apr</td>
<td>22,271,673</td>
<td>2,250,573</td>
<td>10</td>
<td>23,285,252</td>
<td>2,996,729</td>
<td>13</td>
</tr>
<tr>
<td>May</td>
<td>25,260,095</td>
<td>2,395,249</td>
<td>9</td>
<td>29,773,451</td>
<td>3,148,440</td>
<td>11</td>
</tr>
<tr>
<td>Jun</td>
<td>27,742,995</td>
<td>2,229,366</td>
<td>8</td>
<td>34,032,057</td>
<td>3,059,908</td>
<td>9</td>
</tr>
<tr>
<td>Jul</td>
<td>32,972,254</td>
<td>2,300,997</td>
<td>7</td>
<td>33,304,057</td>
<td>3,074,315</td>
<td>9</td>
</tr>
<tr>
<td>Aug</td>
<td>31,841,004</td>
<td>2,201,145</td>
<td>7</td>
<td>32,658,519</td>
<td>3,045,372</td>
<td>9</td>
</tr>
<tr>
<td>Sept</td>
<td>30,935,673</td>
<td>2,211,630</td>
<td>7</td>
<td>32,159,974</td>
<td>3,012,679</td>
<td>9</td>
</tr>
<tr>
<td>Oct</td>
<td>30,945,573</td>
<td>2,326,450</td>
<td>8</td>
<td>32,236,110</td>
<td>3,159,491</td>
<td>10</td>
</tr>
<tr>
<td>Nov</td>
<td>32,229,310</td>
<td>2,306,171</td>
<td>7</td>
<td>33,925,921</td>
<td>3,018,024</td>
<td>9</td>
</tr>
<tr>
<td>Dec</td>
<td>30,013,714</td>
<td>2,543,401</td>
<td>8</td>
<td>33,192,254</td>
<td>2,888,402</td>
<td>9</td>
</tr>
<tr>
<td>Total</td>
<td>339,534,696</td>
<td>26,871,005</td>
<td>8</td>
<td>360,148,736</td>
<td>35,304,487</td>
<td>10</td>
</tr>
</tbody>
</table>

Source: GDFCS Annual Reports and Kenya Dairy Board
Respondents revealed that the Society's competitive strategy is cost leadership strategy. The cost leadership strategy is centered on the capability of the Society to produce and deliver products of competitive quality at lower costs. The management strategically opted to position the Society on cost leadership in order to increase market share and grow revenue by ring fencing supply of raw milk as well as packaging of processed milk in less expensive pouch (thin layer plastic material) instead of the widely used Tetrapak packaging material, saving the Society Kshs. 2.60 per packet of 0.5 litre. Raw milk, which is collected within a three kilometers radius from the Processing Plant, also results in lower transport cost. This way the Society translates its cost advantage into price advantage for its customers and thereby improves the market share and revenues. This resonates well with class C1, C2 and D who are the main market for the Society's products. Furthermore the Society extends its thinking to the value its customers expect, which eventually strengthens its strategic position in the marketplace.

The increase in market share provides a great opportunity for the Society to leverage the economies of scale coupled with cost cutting measures put in place. The Society has been able to pass cost advantage to customers because it has systematically ventured out of the boundaries of its initial core business (supply of raw milk) into adjacent spaces in the dairy value chain.

Mahaga's (2003) study which focused on the relationship between vertical integration and performance of food manufacturing firms in Nairobi defined degree of vertical integration in quantitative terms according to Stephen (1986), where vertical integration is the ratio of value added to sales and concluded that food manufacturing firms that are more vertically integrated were likely to perform better. However, integrating supply of raw milk with processing, transportation and distribution of dairy products has leveraged economies of scale for GDFCS thus providing a linkage between vertical integration and the cost leadership strategy. At GDFCS economies of scale and efficiency brought about by vertical integration form the core around which it executes cost leadership strategy.
The Society compares each and every activity along its value chain with competitors and consequently formulates ways to surpass the competitors. The General Manager clarified that the Society has not only ring-fenced and taken control of sustainable source of raw material (raw milk), but has also focused on process improvement initiatives including cost effectiveness, process efficiency and value chain cycle time. The efforts have resulted in dramatically reduced lot sizes and manufacturing cycle times, reduced customer order lead times, and a better return on invested capital. Key performance indicators applicable in analysis of continuous improvement at GDFCS are summarized in Table 4.4.

### Table 4.4: Key Performance Indicators

<table>
<thead>
<tr>
<th>MEASUREMENT CATEGORY</th>
<th>KEY PERFORMANCE INDICATOR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost Effectiveness</td>
<td>Total cost to manufacture a unit should be lower than the competitors.</td>
</tr>
<tr>
<td>Process Efficiency</td>
<td>Unplanned machine downtime as a percentage of scheduled run time should not exceed 0.03%.</td>
</tr>
<tr>
<td>Cycle Time</td>
<td>Processing and packaging should be benchmarked at 10,000 litres per packing machine per hour.</td>
</tr>
</tbody>
</table>

### 4.5 Vertical Integration, Competitive Strategy and Performance

Githunguri Dairy Farmers Cooperative Society has experienced significant transformation in the last five years, following its entry into processing of dairy products. In a very competitive canary, the strategy to vertically integrate has made a difference in performance. This section presents the Society's performance trend between 2004/2005 and 2007/2008 based on milk collection/intake, processing and sales revenue.
4.5.1 Performance Based on Milk Intake from Dairy Farmers (Members)

Table 4.5 is a tabulation of the Society’s performance in terms of milk intake (collection) from dairy farmers. The Society recorded significant increase in milk collection with 18% in 2006/2007 being the lowest rate and 39% in 2007/2008 being the highest rate.

Table 4.5: Milk Intake from Farmers (Kgs)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>July</td>
<td>1,947,831</td>
<td>2,300,997</td>
<td>3,074,315</td>
<td>3,875,000</td>
</tr>
<tr>
<td>August</td>
<td>1,796,030</td>
<td>2,201,145</td>
<td>3,045,372</td>
<td>3,902,038</td>
</tr>
<tr>
<td>September</td>
<td>1,668,790</td>
<td>2,211,630</td>
<td>3,012,679</td>
<td>3,801,510</td>
</tr>
<tr>
<td>October</td>
<td>1,687,997</td>
<td>2,326,450</td>
<td>3,159,491</td>
<td>3,946,150</td>
</tr>
<tr>
<td>November</td>
<td>1,676,755</td>
<td>2,306,171</td>
<td>3,018,024</td>
<td>3,861,336</td>
</tr>
<tr>
<td>December</td>
<td>1,896,242</td>
<td>2,543,401</td>
<td>2,888,402</td>
<td>4,087,834</td>
</tr>
<tr>
<td>January</td>
<td>2,012,800</td>
<td>2,617,507</td>
<td>2,794,203</td>
<td>4,168,001</td>
</tr>
<tr>
<td>February</td>
<td>1,888,459</td>
<td>2,446,202</td>
<td>2,520,000</td>
<td>3,858,100</td>
</tr>
<tr>
<td>March</td>
<td>2,204,764</td>
<td>2,837,418</td>
<td>3,100,000</td>
<td>4,567,526</td>
</tr>
<tr>
<td>April</td>
<td>2,250,573</td>
<td>2,996,729</td>
<td>3,000,000</td>
<td>4,640,903</td>
</tr>
<tr>
<td>May</td>
<td>2,395,249</td>
<td>3,148,440</td>
<td>3,100,000</td>
<td>4,873,765</td>
</tr>
<tr>
<td>June</td>
<td>2,229,366</td>
<td>3,059,908</td>
<td>3,750,000</td>
<td>5,212,149</td>
</tr>
<tr>
<td>TOTAL</td>
<td>23,654,856</td>
<td>30,995,949</td>
<td>36,462,486</td>
<td>50,794,313</td>
</tr>
</tbody>
</table>

Growth Rate |

Source: Analysis Based on Data from GDFCS Annual Reports

The respondents attributed tremendous increase in milk intake due to the opening of the Processing Plant in March 2004. Since the Society was now able to participate and control the value chain from the farm level to the wholesale distributor level, it was now able to promptly pay higher rates for milk delivered. Besides, the Society's initiative, through Merchandising Stores, to allow dairy farmers (members) to source for animal
fields on credit, translates to high yields per cow thus increasing volumes of milk delivered to the Society.

4.5.2 Performance Based on Milk Processed at the Processing Plant

The Society's performance based on milk processed indicates that the Processing Plant was operating at full capacity which implies that the demand for the products was ever growing. In comparison with raw milk intake, Table 4.6 shows that the Society sometimes received more milk it could not process. This forced the organization to start expanding the Processing Plant at a higher rate than was planned in order to absorb the excess milk. The comfortable position in year 2006/2007 is as a result of expanding the capacity from 50,000 Kilograms to 100,000 Kilograms per day.

Table 4.6: Intake Received by Plant (Kgs)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>July</td>
<td>66,807</td>
<td>1,735,186</td>
<td>3,030,791</td>
<td>3,865,313</td>
</tr>
<tr>
<td>August</td>
<td>331,574</td>
<td>1,790,321</td>
<td>3,012,658</td>
<td>3,892,283</td>
</tr>
<tr>
<td>September</td>
<td>724,416</td>
<td>1,795,672</td>
<td>2,981,901</td>
<td>3,792,006</td>
</tr>
<tr>
<td>October</td>
<td>1,067,624</td>
<td>2,225,337</td>
<td>3,154,492</td>
<td>3,936,285</td>
</tr>
<tr>
<td>November</td>
<td>1,451,112</td>
<td>2,159,258</td>
<td>2,989,988</td>
<td>3,851,682</td>
</tr>
<tr>
<td>December</td>
<td>1,603,639</td>
<td>2,307,090</td>
<td>2,667,699</td>
<td>4,077,614</td>
</tr>
<tr>
<td>January</td>
<td>1,583,104</td>
<td>2,543,213</td>
<td>2,473,244</td>
<td>4,157,581</td>
</tr>
<tr>
<td>February</td>
<td>1,418,634</td>
<td>2,361,257</td>
<td>2,504,047</td>
<td>3,848,455</td>
</tr>
<tr>
<td>March</td>
<td>1,588,575</td>
<td>2,587,384</td>
<td>3,092,250</td>
<td>4,556,108</td>
</tr>
<tr>
<td>April</td>
<td>1,425,722</td>
<td>2,658,341</td>
<td>2,992,500</td>
<td>4,629,301</td>
</tr>
<tr>
<td>May</td>
<td>1,655,248</td>
<td>3,007,509</td>
<td>3,092,250</td>
<td>4,861,580</td>
</tr>
<tr>
<td>June</td>
<td>1,660,394</td>
<td>3,019,407</td>
<td>3,740,625</td>
<td>5,199,119</td>
</tr>
<tr>
<td>TOTAL</td>
<td>14,576,849</td>
<td>28,189,975</td>
<td>36,371,330</td>
<td>50,667,327</td>
</tr>
</tbody>
</table>

Growth Rate: 93% 29% 39%

Source: Analysis Based on Data from GDFCS Annual Reports
4.5.3 Performance Based on Dairy Products Sales

The increase in volume of milk has anchored consistent growth in Society’s revenue base and overall performance. Table 4.7 shows consistency in revenue growth between 2004 and 2008.

Table 4.7: Sales of Processed Dairy Products

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>July</td>
<td>1,284,063</td>
<td>55,657,368</td>
<td>90,754,824</td>
<td>123,380,775</td>
</tr>
<tr>
<td>August</td>
<td>8,718,655</td>
<td>57,339,941</td>
<td>91,914,046</td>
<td>124,241,677</td>
</tr>
<tr>
<td>September</td>
<td>20,037,822</td>
<td>57,410,132</td>
<td>92,029,740</td>
<td>121,040,837</td>
</tr>
<tr>
<td>October</td>
<td>30,374,569</td>
<td>71,477,250</td>
<td>98,010,389</td>
<td>125,646,215</td>
</tr>
<tr>
<td>November</td>
<td>41,283,964</td>
<td>68,969,228</td>
<td>95,372,280</td>
<td>122,945,703</td>
</tr>
<tr>
<td>December</td>
<td>46,008,243</td>
<td>74,331,526</td>
<td>86,714,652</td>
<td>130,157,447</td>
</tr>
<tr>
<td>January</td>
<td>45,485,138</td>
<td>92,586,850</td>
<td>79,703,301</td>
<td>132,709,992</td>
</tr>
<tr>
<td>February</td>
<td>45,685,922</td>
<td>90,945,995</td>
<td>81,041,379</td>
<td>122,842,677</td>
</tr>
<tr>
<td>March</td>
<td>53,189,439</td>
<td>98,782,276</td>
<td>98,704,620</td>
<td>145,430,957</td>
</tr>
<tr>
<td>April</td>
<td>48,744,063</td>
<td>95,595,263</td>
<td>95,520,600</td>
<td>147,767,283</td>
</tr>
<tr>
<td>May</td>
<td>53,154,016</td>
<td>101,268,988</td>
<td>98,704,620</td>
<td>155,181,643</td>
</tr>
<tr>
<td>June</td>
<td>52,500,120</td>
<td>99,628,860</td>
<td>119,400,750</td>
<td>165,955,867</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>446,466,013</strong></td>
<td><strong>963,993,677</strong></td>
<td><strong>1,127,871,200</strong></td>
<td><strong>1,617,301,072</strong></td>
</tr>
</tbody>
</table>

Growth Rate: 116% 17% 43%

Source: Analysis Based on Data from GDFCS Annual Reports

The study shows that dairy products sales rose from Kshs. 446,466,013 in 2004/2005 to Kshs. 1,617,301,071 in 2007/2005 representing 262% growth in revenue over a span of five years. This phenomenal sustainable growth in the history of the Society can be attributed to the strategic choice of vertically integrating supply of raw milk with transportation, processing marketing and distribution of dairy products.
Empirically, it can be summarized that the decision of the management of Githunguri Dairy Farmers Cooperative Society to vertically integrate supply of raw milk with processing, transportation and distribution has enhanced its competitiveness in the market. Due to the economies of scale brought about by vertical integration, the Society’s competitive advantage is built on its capability to process and distribute affordable and quality dairy products thus significantly growing its market share and improving its overall performance.
CHAPTER FIVE: SUMMARY, CONCLUSIONS AND RECOMMENDATION

5.1 Summary

One of the objectives of the study was to find out the extent of vertical integration at GDFCS. The results of the study indicate that the Society is vertically integrated from the farm level to the distribution of processed dairy products. The Society’s By-Laws bind the members, who are dairy farmers, to deliver milk to the Society’s Collection Centres. Any member who disobeys the above provision by selling milk to competitors risks severe punishment including expulsion from the Society. This provision technically ties members (dairy farmers) to a permanent long-term contract with the Society thus ensuring steady and sustainable supply of raw milk to the Processing Plant.

Further, the Society extends credit to dairy farmers by allowing members (dairy farmers) to purchase animal feeds and household items on credit. The money is then recovered through a check-off system based on monthly milk deliveries. The scheme is basically meant to, among others, improve on yield per cow and also bind the farmers to the Society. At the farm level the Society also engages in farmers’ education on thematic areas such as milk quality, animal husbandry and animal health. Apart from intensified quality inspection and control, the Society also offers artificial insemination services to the dairy farmers. The above services are meant to enhance quality and also improve the yield per cow thus impacting on the overall performance of the Society.

GDFCS has established transportation function as a business unit and thus classifying it as a profit centre. Here the business is about transporting raw milk to the Processing Plant, distribution from the main warehouse of merchandise (stocks) to the thirty seven (37) stores scattered within Githunguri Constituency and also delivery of processed dairy products to the market in Nairobi and parts of Central Province. It is important to note that delivery of dairy products to the market is supplemented by hired transporters. The
Society engages in transportation not only as a profitable venture but also to have strong hold on the value chain and therefore be able to control its cost of production.

The Society is involved in value addition (manufacturing) since 2004. It has installed and commissioned a state of the art Processing Plant capable of processing and packaging 300,000 Kgs of milk per day. The factory runs on a 24-hour three-shift arrangement where raw milk is graded, pasteurized, processed and packaged on pouch and tetrapak classic technology. The pouch fresh milk product (packaging material is relatively less expensive) targets the mass market where price of product influences the choice to buy while tetrapak classic packaged product is positioned to a niche market consumers associate packaging with quality and hence are willing to pay slightly more for the products. Other products being processed and marketed by GDFCS include yoghurt, cream, butter and cream. The Society directly delivers processed dairy products to wholesale distributors and supermarkets.

In summary, GDFCS through its activities, has footprints in all stages of the dairy value chain except retailing. The Society has long term contracts with dairy farmers, extends a number of services to the farmers, transports raw milk and also finished products and processes and markets dairy products.

The second objective of the study is about the linkage between vertical integration and competitive strategy. The Society practices cost leadership strategy which is centered on the capability to deliver products of competitive quality at relatively lower cost. The strategy dictates a two-pronged approach whereby the Society has to institutionalize cost control measures while at the same time work tirelessly to increase its market share. To realize the cost leadership position, the Society has no option but to pass the cost advantage to the consumers.

As a way of controlling the cost, GDFCS ventured into processing and marketing of dairy products as well as re-aligning its transport business to be a profit venture. This meant vertically integrating supply of raw milk with processing, transportation and distribution
of dairy products in order to leverage economies of scale. Economies of scale and efficiency brought about by vertical integration anchors the execution of cost leadership strategy. The economies of scales that accrue to the Society include reliable and affordably raw milk supply, controlled transportation costs, own-manufacturing, cost of packaging material, distribution cost and market proximity - the Society products are sold within a radius of about 100 kilometres from the manufacturing point.

In addition, dairy farmers are also members (shareholders) of the Society and the sole suppliers of raw milk for processing. They therefore ensure steady supply to grow and build their business. This eliminates the anxiety associated with sourcing of raw milk from far flung areas attracting high transport and preservation costs. The economies of scale eventually translate to cost advantage which is then passed to the consumers thus providing a linkage between vertical integration and the cost leadership strategy.

In regard to vertical integration, competitive strategy and performance the value addition initiative and distribution of the dairy products has catapulted the Society to the big league of dairy processors in terms of milk intake, processed milk and sales revenue. The Society commands an average of 10% of the market share of processed dairy products.

5.2 Conclusion

Empirically, it can be concluded that the decision of the management of Githunguri Dairy Farmers Cooperative Society to vertically integrate supply of raw milk with processing, transportation and distribution has enhanced its competitiveness in the market. Due to the economies of scale brought about by vertical integration, the Society’s competitive advantage is build on its capability to process and market affordable dairy products as well as its willingness to pass cost advantage to the consumers.
5. 4  Recommendations for Further Research

This study has demonstrated that vertically integrating raw milk supply with processing, transportation and distribution at Githunguri Dairy Farmers Cooperative Society has resulted increased milk intake and processing, sales revenue and growth in market share. However, the researcher has not demonstrated whether improved performance has impacted on the livelihood of the contracted dairy farmers and the community in general. It may be interesting for researchers to conduct further research with an aim of establishing the implications of vertical integration in poverty reduction strategies. The researcher also recommends that further research be conducted to establish if the Society’s performance actually benefits the contracted dairy farmers.
REFERENCES


Mahaga D. F. M. Vertical Integration and performance of Food Manufacturing Firms in Nairobi; *Unpublished MBA Project*, University of Nairobi.


Githunguri Dairy Farmers Cooperative Society; By-Laws 2003
Kenya Dairy Board; www.kdb.co.ke, August 2008
MoA/KARI/ILRI: Intensification of Dairying in the Greater Nairobi Milk-Shed:
    Spatial and Household Analysis, Unpublished Collaborative Research
    Project Report
APPENDICES

APPENDIX I: INTERVIEW SCHEDULE

1. What are the specific activities that are being carried out by Githunguri Dairy Farmers Cooperative Society in the dairy value chain?

2. Describe the process used to integrate the other levels of the value chain into the business.

3. Why was the strategy of integrating milk processing conceptualized and what were the envisaged benefits?

4. What are the benefits which have accrued from vertical integration?

5. Were there teams formed with responsibility to implement the change process?

6. If so, describe the process of team formation and characteristics taken into account in picking the members.

7. What forces necessitated the change from a supplier of raw milk to processor and marketer of finished dairy products?

8. In your view describe factors that influenced the strategic shift?

9. Explain how the transformation affected the strategies, structures, systems, process, policies and procedures that were in place.

10. In brief, how has the transformation impacted on the Society's competitiveness?

11. Did the transformation result in improved performance? Give details.

12. What steps have been taken to ensure achievements of the vertical integration are not eroded?