

THE RELATIONSHIP BETWEEN TEA VALUE ADDITION AND
PROFITABILITY OF EXPORTING COMPANIES IN THE KENYAN
TEA INDUSTRY

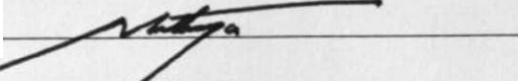
BY
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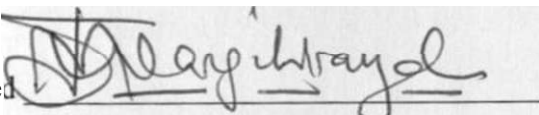
DECLARATION

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

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

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DEDICATION

To my loving parents, Lugard Nzeki and Esther Nzeki. my wife Christine Nyambu and son Philip Nyamai for their support, encouragement, patience and understanding during the time I undertook the MBA degree studies.

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Last but not least. I would like to appreciate the friendship and encouragement received from my fellow MBA classmates.

ABSTRACT

Company profitability, liquidity and shareholder's wealth are affected by how the managers allocate the available resources they have been entrusted with. The Food and Agriculture Organization (FAO) United Nations committee on commodity problems (2005) advises that value added market offers new opportunities, business prospects and incomes. Therefore the question arising are. does it make financial prudence to engage in value addition instead of the traditional bulk tea exports.

The main literature sources include a number of studies in Asia and the Pacific on commodity issues by Jalan (2001), who advocates for legislation and strong policies in the wake of factors like poor yields to increase post-quality competition, volatile prices and barriers like sanitation. Also Mohanty (2006) indicates that profit margins from processed food exports are more than those for semi-processed food products and primary food products in that order.

This particular study used data covering a five year period from 2001 to 2005 derived from the Nairobi Stock Exchange (NSE) and end of year published financial reports for those companies which were not listed. Returns on equity and asset were determined by net income divided by average equity and average total assets respectively. Security returns were determined using the market model on monthly basis.

The study revealed that profitability from companies that engaged in value addition is higher compared to those of companies that did not engage in value addition. The study concluded that there exists a strong relationship between value addition and profitability for tea exporting companies in Kenya.

CHAPTER ONE

1.0 INTRODUCTION

1.1 Background of the Study

Kimani (2003) warns that Kenya risks losing major tea markets if it does not combine bulk and value addition in the production of tea. At present Kenya is the second largest tea producer in the world, with eighty percent of its production going to only five countries: Pakistan, United Kingdom, Egypt, Afghanistan and Sudan. This lack of diversity of customers places Kenya in a precarious position where a drop in demand from any one of these countries could have a major impact on Kenyan tea production. The higher percentage of Kenyan tea is exported as a raw product, unlike Sri Lanka that has value addition on almost fifty percent of its tea production. Using France as an example he states that France is the worlds largest agricultural exporter, it is also a valuable role model to consider in that only two percent of the total economic output of France is produced by agricultural products, compared to Kenya's 30 per cent. By contrast, value addition to French products contributes 10 per cent, or about \$150 billion, to the French GDP.

Kinyili (2003) argues that Kenya can earn more from her tea through value addition activities namely by using company brand names and packing for the final retail market. She further notes that Kenya is losing additional revenue by exporting her high quality tea in bulk. The tea should be value added before export for the country to earn more and benefit from her high quality tea. Value addition would also increase employment opportunities in the country.

Jalan (2001) in his study 'Value addition in Indian agriculture' presents that the domestic farm sector should take urgent steps to tap its potential through value

addition within the next five years if it is to survive global competition, he argues that India needs to support its farm sector with strong policies and increased public investments in the wake of factors like poor yields in the 1990s, increased post-quality competition, volatile prices and barriers like sanitation. With changed trade scene, Jalan (2001) calls for a full assessment of the impact of WTO on all domestic sectors. India and the developing countries should urge the developed nations to keep their promises and open up their markets equitably.

Food and Agriculture Organization (FAO) United Nations committee on commodity problems (2005) study reported that the top five exporting countries represented about 68 percent of total tea exports, in 2001/2003, with Sri Lanka being the largest export earner (US\$ 550 million). Over the period of analysis, Vietnam showed the largest percent change in export value (254 percent), followed by Sri Lanka (97 percent), while the United Kingdom, Indonesia and Tanzania recorded a 5 percent, 11 percent, and 14 percent decline, respectively. Of the 20 major exporters, 6 were high income countries, with France, Belgium, and Germany increasing tea exports by more than 44 percent, reflecting exports of value added tea (importation of tea in bulk for blending and retail packed for exports. Notably these countries did not have their own tea).

Mugambi (2005) observed that in a vibrant value addition sector there exists a vast opportunity for job creation in warehousing, transport, the port, trading firms, packaging industry, and advertising industry among others, which would in turn translate to more revenue for the exchequer through taxes. These opportunities are currently being exploited by other centers such as the Dubai Tea Center which is offering incentives to tea traders who wish to value add. Meaning Kenya would eventually witness an exodus of tea traders and producers from Mombasa to such centers.

Arunajatesan and Balaji (2004) concluded that a focus on value addition in the agriculture sector is vital for comprehensive development of the rural economy. Since the food processing industry creates jobs, demand for agricultural raw materials, leads

to diversification and commercialization of agriculture, enhancing the incomes of farmers and creating surpluses for export of agriculture foods. The broad-based development of the food processing industry would improve both the social and physical infrastructure of rural India. Mohanty (2006) reiterates the importance of the food sector in India, he indicated that food in India has an economic multiplier of between 2 to 2.5. That is for every rupee of revenue from food, the economy at large got Rs. 2 to 2.50.

Xingwana (2007) during the Imbizo week an important platform for mobilizing communities to partner with government in accelerating service delivery and combat crime recommended that South Africa should not irrigate tea anymore and that although it would result in a drop in yield production, the decreased crop output would be compensated for by the value added process which would attract higher prices. Resultant electricity and water recurrent expenses would eventually come down which the communities could then have more disposable income to purchase other family necessities.

Daley (2005) the chief buyer at Barry's Tea Limited, in his publication states that his company accounts for 35% of the Irish tea retail trade and that Ireland has the world's highest per capita consumption of high quality teas. Together with other big retail chains like Lyon's Tea and Bewley's, the bulk of these companies' tea purchases are sourced from Kenya and Rwanda. He further states that Irish blends have a large proportion of East African teas accounting for up to 80% of the total import.

Michuki (2000) observes that Kenya is rarely associated with tea production despite its long history in tea production and its sizable contribution to the world's tea output because of commercial blending in Europe making Kenya tea lose its origin marks. Kenyan tea is a favorite for many commercial blends because it tends to have more infusion giving surfaces and thus brews a stronger tea per unit weight of leaf than most other black teas. Blenders mix the high quality Kenyan tea with teas of lower standards to achieve an acceptable strength and flavor.

1.2 Tea Industry in Kenya

According to studies by Kinyili (2003), the world tea production is dominated by five countries namely, India, China, Sri Lanka, Indonesia and Kenya, which total when combined to about 75% of the world production. India is the largest producer and consumer of tea. In Africa tea producing countries include Kenya, Malawi, Tanzania, Zimbabwe and South Africa producing about 25% of world exports. The major import markets are in the developed countries but with the increased consumption in developing countries, there is a gradual shift to developing countries becoming big import markets.

A European settler Mr.G.W.L.Caine introduced tea into Kenya from India in 1903. Since then Kenya has grown into an important world tea producer, with an annual production of about 300 million kgs. Kenya is the fourth largest tea producer and the second biggest exporter in the world. The country contributes 10% of total global tea production and commands 21% of all global tea exports. Kenya produces high quality tea with a good bright colour that is used for blending other teas in the world market.

Waweru (2005) reported that tea was by then Kenya's leading foreign exchange earner. In 1999, it accounted for about 20% of the agricultural GDP. Tea production had expanded tremendously from 18,000 tons at independence in 1963 to over 260,000 tons in 2000 and was projected to reach 310,000 tons by 2005. He further revealed that tea earns the country Ksh. 34 billion. Notably, among all of Kenya's export crops, only tea had maintained this upward trend in production and export earnings.

Mugambi (2005) however adds that against this performance in tea production, quality and income earnings, the tea sub-sector has to contend with several challenges threatening its survival. There is stagnating or declining demand in most of the main traditional markets, and a general decline in tea prices in the world market. Secondly, tea production has been associated with a number of environmental problems, particularly deforestation. He continues that tea is sourced from both plantations,

employing a large number of workers, and factories relying solely on smallholder production. Smallholders (with holdings of less than 50 acres) currently produce over 60% of Kenya's tea output partly because tea cultivation was promoted to encourage small farmers to participate in the cash economy.

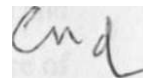
1.3 Product Description and Economic Importance

According to Tea Board of Kenya. Kenya produces the best quality black tea in the world by processing the two top young leaves and a bud. The type of tea that is produced is determined by the mode of processing that is employed. About 97 % of Kenya's tea is black Cut, Tear and Curl (CTC), which is very popular. Up to 1970 Kenya was producing mostly black orthodox tea but gradually shifted to CTC which has a competitive advantage. To date very little black orthodox tea is produced and some limited amount of green tea is produced on order. Green teas are not oxidized during production they are instead withered and immediately steamed to prevent oxidation and then rolled and dried. The quality of black tea is highly depended on; the regularity of harvesting, the number of top young leaves harvested and the mode of harvesting or plucking and the care with which the green leaves are picked. Harvesting only the upper two leaves and a bud produces the best quality tea. About 60% of the total crop in the country is produced by smallholder growers who process and market their crop through their own management agency, the Kenya Tea Development Agency Ltd. (KTDA). The remaining 40% is produced by large-scale estates that are managed by major multinational firms associated with tea in the world. Kenya National Bureau of Statistics (2007) reported that 10% of Kenya's population is directly or indirectly employed by the tea industry making it the largest single commodity sub-sector in the agricultural sector with a high dependency.

Tea Board of Kenya in 2004 quantified the crops importance by showing that tea production and planted area had expanded rapidly since independence in 1963 from 18,000 metric tonnes and 21,448 hectares to 293,670 metric tonnes and 131,418 ha in 2003. Tea exports have been consistent for several decades. Tea earned Kenya Kshs 33 billion in 2003 which is about 20% of Kenya's total export earnings. Kinyili

(2003) notes that the remarkable growth in the tea industry' is attributed to the conducive investment policy for the estates sub-sector particularly, the non-interference policy from the Tea Board on production, processing and marketing activities as well as the KTDA's management of smallholder tea production

Xingwana (2007) in her contribution on key reforms of the South African tea industry revealed that tea is a developmental crop and that families engaged in tea growing in Kenya are able to afford to take their children to universities from tea proceeds.



1.4 Value Adding Process

According to Tea Board of Kenya (2005) a value addition analysis typically examines the activities involved in marketing a product, from research and development, to raw materials supply and production, to transport and delivery, noting where value could be added, and examining business needs and how upgrading particular activities could enhance profitability. The analysis of value addition is relevant to Kenya as it helps assess the fundamental factors affecting world tea prices, and the policy initiatives which could improve profitability. Tea exporting countries are ranked as value adding if their products moved to a higher priced segment of the market without losing market share.

FAO (2005) define value addition as a move to activities that offer higher export prices. FAO further states that upgrading can be accomplished in two ways;

First, by shifting to higher value added activities within the chain, an expansion referred to as vertical process integration. For tea, this type of upgrading requires Kenya to vertically integrate intermediate and final processing activities, which are often, value added stages of production such as tea bags or retail packs.

Secondly, by product differentiation, which can be vertical (higher quality), or horizontal (organic, fair traded, and gourmet).

FAO (2005) further clarifies that upgrading does not necessarily require integrating intermediate and final processing activities. This means Kenya could attain higher net returns in the non-value added market, as long as costs of production remain below economic returns. Nonetheless, upgrading into value added products offers potentially higher export prices and is an integral part of export diversification strategies in the face of volatile commodity prices.

Table 1.1 illustrates changes in the tea trade by product category in terms of value and volume. Value added black tea was the only market that showed a rising unit price of 21.9 percent, while prices for bulk black tea declined by 4.4 percent.

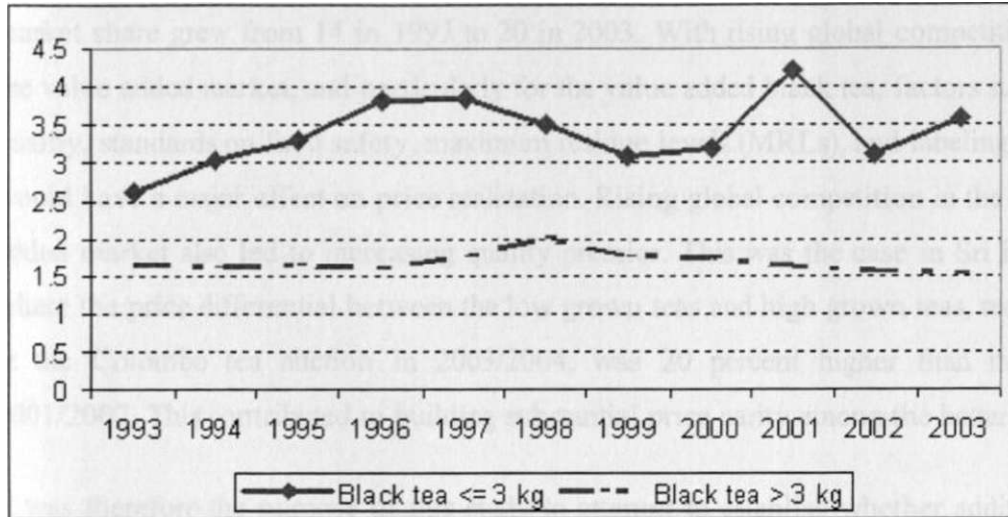
Table 1.1 Changes in tea trade by market category

	1993/1995			2001/2003			Unit value (US\$/kg)	% change in value	% change in quantity
	Value (US\$' 000)	Quantity (MT)	Unit Value (US\$/kg)	Value (US\$' 000)	Quantity (MT)	Unit value (US\$/kg)			
Black tea in packs <3 kg	617356.0	209907.4	3.0	802174.3	222894.6	3.6	21.9	10.9	
Green tea in packs <3 kg	59255.9	19029.2	3.1	181928.6	78155.5				
Black tea in packs >3 kg	817930.8	497680.5	1.6	1443174.8	918664.0				
Green tea in packs ≥3 kg	173488.1	97732.0	1.8	187562.7	148202.2				
Extracts of tea or mate	126594.0	62383.7	2.1	286658.4	197222.4				

Source: Data calculated from United Nations trade statistics database and FAO statistical database

Figure 1.1 graphically illustrates that value added black tea had a fluctuating but rising unit price unlike bulk black tea exports that originated from Sri Lanka, China and Tanzania that had a fluctuating but declining unit price.

Figure 1.1 Price Changes in black tea products (US\$/Kg)



1.5 Statement of the Problem

Kinyili (2003), states that about 95% of the locally produced tea is exported in bulk and that only a small percentage is packed for export. Traditionally, Kenya tea has been sold to overseas market in bulk form where it is much sought after by leading tea companies to blend and add taste to the most respected tea brands in the world. This practice has denied Kenya a lot of revenue as tea sold in bulk does not attract good prices when compared to the prices overseas packers have benefited through value addition.

At the three-digit level Standard International Trade Classification (SITC), for the period of 2001/2003, tea was the 21st largest exported product out of 27 agricultural product groups. Most of the agricultural products experienced declining unit price of about 20 percent between 1993/1995 and 2001/2003 underscoring a need for diversification and value addition.

FAO (2005) analysis revealed a trend toward a "unique" world price for value added black tea (Table 1.1), as the dispersion of individual countries unit prices around the average export price declined by 32 percent. This decline in the average export price differential between individual exporting countries was exacerbated by the growing diversity in global supply sources; the number of countries with a least 0.50 percent market share grew from 14 in 1993 to 20 in 2003. With rising global competition in the value added market, and particularly for the value added black tea, factors such as quality, standards on food safety, maximum residue levels (MRLs), and labeling rules would have a major effect on price realization. Rising global competition in the value added market also led to increasing quality premium. This was the case in Sri Lanka where the price differential between the low grown teas and high grown teas, realized at the Colombo tea auction in 2003/2004, was 20 percent higher than that of 2001/2002. This contributed to building substantial price parity among the better teas.

It was therefore the purpose of this study to attempt to establish whether additional profitability can be realized through value addition activities on tea given the global trend of declining commodity prices.

1.6 Objective of the Study

To determine the impact of value addition on profitability of exporting companies in the Kenya tea industry.

1.7 Importance of the study

This study will be significant to the following:-

a. Investors and Financiers

The investors and their financiers will be able to make more informed decisions when investing their money in either the traditional bulk exports or in value added products.

b. Regulators and policy Makers

Currently the regulators within the tea industry and government have all their efforts geared towards increased land acreage under tea plantations and increase leaf output per acreage of land. This paper will form a basis of formulating a policy towards the industrialization of the country.

c. Academicians and Researchers

Information gathered from this study will enrich knowledge in investments and will attract additional input from academicians and researchers.

CHAPTER TWO

2.0 LITERATURE REVIEW

2.1 Introduction

This chapter discusses the topic under different sections in order to give an insight into issues relating to profitability as a result of value addition on tea exports.

2.2 Economic Significance of Value Addition

A study by Mohanty (2006) on food processing industries in Asia and the Pacific indicates that profit margins from processed food exports, including semi-processed food products are more than those for primary food products in that order.

Athukorala and Jayasuriya (2003) observed that many developing countries that export processed foods to developing countries have emerged as a major new source of dynamic export potential in recent years. In fact the share of processed food exports as a percentage of total agriculture trade from developing countries had grown drastically to take advantage of the improved prices.

Githongo (2004) stated that Kenya was the world's leading exporter of tea, having overtaken Sri Lanka, but exports only one per cent of its tea in value-added form in contrast to Sri Lanka's 54 per cent. Given that experts estimate that adding value can triple export earnings he questioned what Kenyans were waiting for.

At the 2004 second East African Business Summit in Kenya, which was based on the theme "Integrating the Reconstruction Effort: The public-private road to economic recovery", Kimani (2004) identified to the attending chief executives two specific projects; one being to implement an agribusiness revolution through a technology mission borrowed from the Indian experience that would realign government and

private sector on a rapid mission, result-oriented approach to value-adding in agribusiness; and two, to set up factories in Kenya to blend and package tea for export. Specific value-addition project proposals on tea, cotton, meat and leather, vegetable produce and livestock also emerged during their discussions. The fiscal and economic recommendations made to the private-sector CEOs ranged from income tax and other tax concessions for investors to increasing import duties on value-added imports, facilitating financial support and concessionary finance to value-adding investments, turning value-adding factories into export processing zones and introducing either immediately or in phases export duties on exports of non-value-added produce.

Kimani (2003) described the vast export potential of tea in a global market dominated by Kenya and Sri Lanka. In 2002, Kenya was the world's second-largest exporter with 19 per cent of the market, while the then largest exporter, Sri Lanka, had 20 per cent and the fourth largest, India, with 14 per cent. Kimani further stated that India and Sri Lanka export 54 per cent, and 50 per cent respectively, of their teas in value-added form, in stark contrast to Kenya's 1 per cent.

Cotton too had enormous potential according to Kassam (2004) described the economic significance of cotton in India and Pakistan. In India, for instance, the apparel industry alone employed more than 70,000 small-scale enterprises, whereas the thriving cotton and textile industry in Kenya was destroyed by liberalization and the proliferation of second hand clothes in the 1980s. The cotton industry currently employs about 140,000 smallholders but has yield levels well below the world average and poor quality fibre. The sub-sector's collapse was triggered by the collapse of the co-operatives that owned most ginneries; the regulatory vacuum left by a liberalization process that did not clarify the role of the Cotton Board of Kenya; the collapse of input credit mechanisms and prevalence of contaminated or adulterated seeds, pesticides and other agrochemicals. An indication of the latent opportunity in this sector can be found in the value chain for a pair of denim jeans which has 48 per cent of the final cost of the item being cotton. Taken as an indicative average for all apparel, total exports in the year 2003 were to the order of \$200

million, suggesting that a potential market of \$100 million was available locally but which ultimately went to imported alternatives. This challenge was given added urgency because the window of opportunity under Agoa was closing, forcing the textile superpower China to join the World Trade Organization and numerous textile producing countries to pursue bilateral agreements with USA.

Thairu (2004) illustrated the enormous potential of value addition in horticulture, Kenya's key foreign exchange earners. Using vegetables as an illustration, he showed that fresh exports are able to extract a bulk price of \$ 1.60 per kg from a raw material price of \$0.60 per kg. This contrast's with processed exports that command a minimum price of \$2.30 per kg and a high value price of \$3.30 per kg while the specialty products attracted a premium price of up to \$5 per kg. What discourages farmers in the rural areas from exploiting these opportunities is a lack of packing houses with cold storage facilities and refrigerated transportation.

The leather industry was equally highlighted as having a high potential by Kassam (2004) who noted that currently over 90 per cent of hides and skins from Kenya are exported in raw form and that finished leather can yield a return four times that from rawhide. He further noted that finished leather products can yield a return of up to 12 times that of rawhide and that under Agoa, the leather industry has access to a potential \$7 billion American market for finished products. On this basis, it is calculated that if 100 per cent of East Africa's output were to be exported as raw hides and skins, it would earn just under \$80 million. If it were all exported as finished leather, however, it would fetch up to \$305 million, while finished leather products could bring in all of \$920 million.

Kassam (2004) further identifies that the cattle and pig industries also have great potential in the processed meats and corned meats market, but presently most of Kenya's exports consist of live animals. All that was missing was identified as marketing and the enforcement of quality requirements to ensure that the quality of hides and skins was up to the standards needed for processing into high quality finished goods.

At the second East African Business Summit. Nyong'o (2004) notes that immense opportunities which exist for the small and medium enterprises (SMEs) sector to bridge opportunities between farmers and a nascent value-addition industry.

2.3 World Production of Tea

Kumar and Visvanathan (2002) state that tea is nearly 5,000 years old and was discovered in 2737 B.C. by a Chinese emperor Shen Nung when some tea leaves from a hereby *Camellia Sinensis* plant were accidentally blown into a pot of boiling water. Mondal (2007) identified the origin of tea in southern Asia around the intersections of latitude 29°N and longitude 98°E, the point of confluence of the lands of northern India, north Burma, southwest China and Tibet. From this centre of origin the plant was introduced to more than 52 countries. In the 1600s, tea became popular throughout Europe and the American colonies. Today tea is consumed as a beverage throughout the world and grown widely in countries of Asia, Africa and the near East. The earliest mention of tea is from China in 350 B.C from where it found its way to Europe in 1559, then England in 1615 and to Indonesia in 1684. Commercial cultivation began in 1823 and 1867 in India and Sri Lanka respectively (Wickramasinghe. 1978). Tea grows ideally at about 2,400 m (8,000 feet) height above sea level and it prefers a warm, humid climate, with plenty of well-distributed rainfall and long sunlight days, implying that it flourishes well nearer the equator.

Freshly harvested tea leaves contain about 75 to 83% moisture (wet basis) while the processed tea has a moisture content of less than 3%. Tea production is simply a drying process. However some chemical changes take place by natural fermentation which creates different varieties of tea. Though tea is produced throughout the world in similar processing conditions, they differ from each other depending on the plant variety, climate, soil conditions, method of cultivation and nature of shade.

Mainly, the production process and the plant variety dictate the flavor, aroma, color and stimulant characteristics of each kind of tea. Though there are many varieties of tea produced in the world, black tea is considered as the major product worldwide. Tea is mainly produced in most tropical countries in Asia, South America and

Southern Africa. In Asia; India, Sri Lanka, China. Vietnam, Japan and Indonesia are amongst the leading countries that produce tea. India and Sri Lanka produce most of the black tea while the other countries produce green tea and their varieties. In Asian countries tea is one of the major commodities exported to the United States of America (USA) and Europe. In South America; Argentina and Brazil grow tea but it is not a major industry and most of the tea processed is exported to the United States of America (USA). The extreme topographic conditions make mechanized tea plucking necessary, making it not suitable for higher end flavored tea.

In East and Southern Africa, tea is grown mainly in Kenya, Tanzania, Uganda, Malawi and South Africa. Kenya is the most important tea producer in Africa, (3rd ranked in tea industry in the world) and it has captured a ready market in Northern Africa and Middle East for its products. Records show that the world's tea industry is more or less concentrated in India, China, Kenya and Sri Lanka. However, India and Sri Lanka play a dominant role in black tea production in South Asia. In 1998, world tea production was about three million tons and in the last decade it grew at an average yearly rate of about 1.8%. Some estimates suggest that world tea production declined from a record 1998 output of nearly three million tons to 2.7 million tons in 1999 (Anon International Tea Committee, 2001). The tea industry is one of the major agro-industrial sectors contributing significantly to the national economy of many developing countries such as India, Sri Lanka and Vietnam through potential employment creation and export earnings ranging from 50 to 780 million US\$. The industry in Vietnam has grown rapidly at about 10% estimated annual growth, and in India, the production is growing to cater for the high local demand and increasing export market. In Sri Lanka, it is expected that the production will level off at 300 million kilogram level, mainly due to land restriction. Both, India and Sri Lanka are trying to increase the yield of cultivation to a much higher level which will result in increased tea production.

The tea industries contribution to the gross domestic product (GDP) is substantial and is one of the countries major means of earning foreign exchange. The world demand

on tea is on the increase and most of the European and western countries prefer Asian black teas of strong character. During a ten year period, the world prices on tea rose by about 13%. (Thilakaratne, 1999). Other than bulk tea, value additions of tea by way of packaging, blending to get unique characteristics, impregnation, and flavoring of tea is very common in tea exporting countries, which has considerably increased the earning potential for tea growing countries.

According to Tea Board of Kenya the quality of black tea is highly depended on the regularity of harvesting, the number of top young leaves harvested and the mode of harvesting/plucking and the care with which the green leaves are picked. Harvesting only the upper two leaves and a bud produces the best quality tea. About 60% of the total crop in the Kenya is produced by smallholder growers who process and market their crop through their own management agency, the Kenya Tea Development Agency Ltd. (KTDA). The balance of 40% is produced by large scale estates which are managed by major multinational firms associated with tea in the world. About 10% of Kenya's population is directly or indirectly employed by the tea industry which is the largest single commodity sub-sector in the agricultural sector.

2.4 Types of Value Addition

Kumar and Visvanathan (2002) illustrated the types and form that value addition can be achieved through:

2.4.1 Packing

Packing involves breaking bulk tea and packing into smaller packets of 2kg, 1kg, and 0.5kg and below, which can be availed on a supermarket shelf. This form of packing makes tea affordable to households and institutions that want to buy tea in small quantities for daily consumption without holding huge stocks.

2.4.2 Packaging

This is the outer package in which tea is packed. It should be artistic, stylish and colorful to attract customer attention. It is a form of advertising and marketing the core product itself through presentation and differentiating it from those of competitors.

2.4.3 Teabags

A 3gms to 5gms packet of tea in food grade material which can be suspended using a string into a cup or dropped inside the cup to prepare the tea drink. The concept was developed in 1908 by Thomas Sullivan, a tea merchant of New York, as a marketing opportunity when he realized that restaurants were brewing the tea samples in bags to avoid the mess of tea leaves in the kitchen.

2.4.4 Herbal Tea

Herbal teas contain no true tea leaves, but are created from flowers, berries, peel, seeds, leaves and roots of many different plants that create exciting flavors and aromas in a rainbow of colors from pale yellow to deep red.

2.4.5 Iced Tea

It is a form of cold tea served in a glass with ice and may or may not be sweetened and it was first served by Richard Blechynden, a tea plantation owner, in 1904 at St. Louis World's Fair, United States. It is an alternative to carbonated soft drinks and is popular in hot countries. Sweet tea, also known as southern table wine, is brewed with a large amount of sugar added while the tea is still hot and the mixture of sugar and tea cooled, diluted with water and served.

2.4.6 Instant Tea

Instant tea is similar to freeze-dried instant coffee and was developed in the 1930s but was not commercialized until the late 1950s. Instant tea is presently manufactured by

spray or freeze drying the concentrated brew of processed tea dust. This method has drawbacks of inferior quality, high cost and energy. A new technique has been developed for the production of instant tea powder from the plucked green leaves which are crushed and the juice pressed out and fermented. Instant tea produced under this method has good liquoring characteristics and some chemicals are also within the acceptable range example; theaflavin (TF) to thearubigin (TR) ratio is 10.71 for instant tea and 12.12 for tea granules, caffeine content is 40.4 mg/cup in instant tea and 96 mg/cup in tea granules (Sinija, Mishra and Bal, 2007). Instant tea often comes with added flavors such as vanilla, honey or fruit and may contain powdered milk. It is popular due to the convenience of not requiring boiling water.

Other types of value addition mentioned are scented teas, decaffeinated teas, and canned teas.

2.5 Achieving Value Addition

FAO (2005) define value addition as a move to activities which offer higher export prices and that it can be accomplished by either vertical integration or horizontal integration as explained below;

2.5.1 Vertical Integration

Vertical integration also known as product differentiation involves shifting production to higher value adding activities within the chain. In tea this type of upgrading requires producing countries to vertically integrate intermediate and final processing activities which are often, value adding stages of production such as tea bags or retail packs.

2.5.2 Horizontal Integration

Horizontal integration involves organic, fair trading and gourmet. For Sri Lanka, exports of value added tea (retail packs, tea bags, metal cans, and wooden boxes)

accounted for 41 percent of total volume in 2003, while export of tea in bulk was limited to 59 percent.

FAO (2005) further clarify that it is worth emphasizing that upgrading does not necessarily require integrating intermediate and final processing activities. Kenya could attain higher net returns in the non-value added market, as long as costs of production remain below economic returns. Nonetheless, upgrading into value added products offers potentially higher export prices and is an integral part of export diversification strategies in the face of volatile commodity prices

The key strategies which might be used to retain and/or capture more earnings in upgrading markets, as well as recommendations from the value chain analysis include:

- Encouraging and strengthening backward linkages through utilization of locally available materials and inputs (example packaging and blending machinery could be acquired from national/regional suppliers).
- Taking measures to improve quality control and monitor production processes, particularly with regard to pesticides and minimum residual levels (MRL) fixed by the European Union.
- Knowing that some of the highly priced tea bags may contain up to 21 teas from different sources, it is likely that relaxing imports of teas into producing countries for blending and processing will help toward enhancing product quality, diversifying sources, and expanding possible blending combinations.
- Increasing efficiencies within the national component of the value chain by assessing the performance and dynamics between linkages. Such an assessment should inform policy makers about the type of trade support initiatives, and competition policies needed to expand the performance of the value chain.
- Encouraging exporters or producers to participate in international trade fairs, single country exhibitions and specialized fairs to expand and consolidate existing markets as well as identify potential niche markets. New initiatives by

exporters could enlarge the scope of geographical diversification of exported value added teas.

2.6 Challenges Associated with Value Addition

FAO (2005) notes that while the value added market offers new opportunities and prospects, they also raises constraints. Investment costs are considerable for the establishment of viable processing plants and for undertaking marketing efforts. Branded value added products may increase earnings, but having them recognized and accepted at the global/national level is challenging and expensive. Government intervention in the form of tax breaks, subsidies, and technological support may be useful in launching successful processing units in some instances.

With rising global competition in the value added market, factors such as standards, quality, and labeling requirements may affect price realization. There is a need to formulate strategies to enhance growers' participation in the value added market, especially in Kenya where smallholders account for more than half of the total tea production.

Athukora (2004) concludes that the capacity of Asian countries to penetrate the markets of developed countries depends on their ability to meet increasingly more stringent food safety standards imposed by developed countries. These standards are not only costly to meet but are also subject to frequent changes. Mohanty (2006) notes that the food safety certifications are numerous including Hazard Analysis Critical Control Point (HACCP), Good Manufacturing Practice (GMP), Good agricultural Practices (GAP) and ISO 3720 are all designed by various bodies and differ significantly across export sectors. The issue of compliance costs to upgrade sanitary conditions in the Bangladesh frozen shrimp industry to satisfy the European Union and the United States hygiene requirements was estimated at US\$ 17.6 million in 1997 to 1998 (Cato, 1998)

Kimani (2003) notes that Kenya is still burdened with awkward laws and a grinding bureaucracy which has yet to devise an export strategy. From a physical

infrastructural point of view Kenya suffers from the high cost of power, technology and the setting up and operating of a business. There also exists the potential problem of punitive tariffs which are placed on value added products by developed countries. While some of the answers are fairly clear, such as the partnership of Kenyan companies with companies within the importing country to avoid punitive tariffs, others seem less obvious. Expensive infrastructure as well as a lack of drive from the governments' side combines to make Kenya a risky investment for value addition.

Arunajatesan & Balaji (2004) notes that quality raw material has to be produced in sufficient quantity and properly packed to facilitate further processing. This calls for educating the farmers in production and harvesting techniques as also in packing. Some of the critical areas that require immediate attention are strengthening of the infrastructure like cold storage, improving the production process in the agriculture sector, relaxing or removing stringent laws and regulations, and ensuring reliable power supply.

The brand name of exporting firms in studies done by Mohanty (2006) is a new-market strategy to deal with close competitors in the food and processed food sector. While large firms can develop brand names over time, the task is more difficult and costly for small firms. Large firms find it important to develop their brand name to improve market access and venture into new markets.

Mohanty (2006) notes that tariff escalation is evident as value are added to tea. Tariff was much higher for processed foods than for unprocessed primary products. Processed foods products from Asia and the Pacific region faced high level of protection in their export markets. Minister for Trade and Development Dr. Mukhisa Kituyi (2004), on the fiscal and economic policy presentations at the East African Business Summit in Kenya, warns that the tariff and duty proposals to promote value addition in Kenya's industries have to be within the parameters given in the existing agreements on the East African Customs Union.

Hettiarachchi (2007) notes that machinery and equipment required for value addition are very expensive and that purchasing plus setting up such a facility require a minimum of US\$ 1.1 million. He further argues that production of good quality tea needs fertilizers regularly and that the least cost of applying fertilizer per hectare is rupees 24,000 in India. His studies show that a loss of production of 5% due to non application of fertilizer can result in a loss of nearly 15 million kg of tea which when calculated at a modest market price of US\$ 2.5 per kg will result in US\$ 37.5 million or 4 billion rupees.

CHAPTER THREE

3.0 RESEARCH METHODOLOGY

3.1 Study Population

The study population was of forty nine tea companies' currently engaged in exportation of tea from Kenya. The study focused on companies that had continuously exporting between the periods of January 2001 to December 2005.

3.2 Sample

Due to the small population size the study covered all the exporting companies registered by East Africa Tea Trade Association. Hence there was no need for sampling.

However the population was divided into two groups of companies, namely companies that were involved in value addition up to the end of the year 2005 as the experimental group and companies that had not engaged in value addition as the control group.

3.3 Data Collection Techniques

Due to lack of data availability by some companies due to financial confidentiality only thirty one companies were evaluated (see appendix 1). The data for calculating the ratios was secondary data derived from the Nairobi stock Exchange Information and financial statements of the companies obtained from annual reports.

3.4 Data Analysis Methods

Profitability from tea exports categorized the companies into two groups namely;

- (1) Companies that were involved in value addition and
- (2) Companies that export tea in bulk.

Various ratios for measuring performance were calculated for both the experimental and the control groups for the period 2001 to 2005.

For each of the sampled organization the following ratios were computed:

$$\text{i. Return on Equity (ROE) = } \frac{\text{Net Income}}{\text{Average Equity}}$$

$$\text{ii. Return on Asset (ROA) = } \frac{\text{Net Income}}{\text{Average Total Assets}}$$

$$\text{iii. Return of Security (Rc) = } \frac{\text{Pj} - \text{Po} + \text{Dividends paid}}{\text{Po}}$$

Where,

Pi = Price of Security at the end of period

Po = Price of Security at Beginning of period. (Pandey, 2001)

$$\text{iv. Earning per Share (EPS) = } \frac{\text{Net Income} - \text{Dividend on Preferred Stock}}{\text{Average Outstanding Shares}}$$

$$\text{v. Profitability Index (PI) = } \frac{\text{Net Present Value} + \text{Initial Investment}}{\text{Initial Investment}}$$

A mean and standard deviation for each ratio was computed for the period 2001 to 2005 for the organizations in both the experimental and the control groups. The ratios for both samples were compared to establish any difference in the means. The differences in the means observed were tested for significance using the Chi square test.

The difference in the average rate of change in ROE, ROA, EPS and PI was tested for significance using the Chi square test:

The null hypothesis (H_0) was that the two variables are independent that is profitability is independent of value addition. The alternative hypothesis (H_a) tested was that profitability is dependent on value addition.

$$\text{Chi-square} = \sum \frac{(\text{Observed} - \text{Expected})^2}{\text{Expected}}$$

$$\chi^2 = \sum \frac{(O_i - E_i)^2}{E_i}$$

A 5% significance level was used

CHAPTER FOUR

4.0 DATA ANALYSIS AND FINDINGS

4.1 Introduction

In this chapter, a discussion of the results is presented. The analysis involved the use of secondary data collected from the financial statements and reports of the identified companies.

The data was derived from a five year period from 2001 to 2005 for thirty one companies that were involved in tea exportation. The companies evaluated are grouped into those involved in value addition and those that export in bulk as shown in appendix 1.

Profitability ratios are calculated for the two groups of companies for each year as shown in appendix 3 and appendix 4 respectively. The mean ratio for the period 2001 to 2005 both years inclusive for each organization and each year is calculated and is summarized in appendix 5 and 6.

The mean ratio for each of the thirty one organizations was extracted and grouped into value adding and non value companies. The mean and variance for each company is computed and is shown in table 4.1 and 4.2 while table 4.3 and 4.4 summarize the mean and variance per year.

Share price data obtained from the Nairobi Stock Exchange (NSE) relating to ten companies that were continuously listed during the period of study were used to calculate the monthly returns using the market model. The returns were calculated using the price at the beginning of the month as P_0 and price at the end of the month as P_i . The dividends paid were added to the difference of share prices ($P_0 - P_i$) where applicable, and the sum divided by P_0 to get the returns in each month. The firms

were then divided into two groups: those that added value and those that did not. The information was tabulated and graphs drawn to compare security returns for the two categories of companies. Finally the chi-square test was also done to establish whether there is a relationship in profitability between value adding firms and firms that did not value add.

4.2 Data Presentation and Analysis

4.2.1 R.O.E Relationship between Value Adding and Non Value Adding Companies

The return on equity for the value adding companies is higher than that of companies that did not engage in value addition as shown in table 4.1. The overall difference in the means for the two groups is approximately 65.96% with the value adding companies mean being higher.

Table 4.1: Mean return on equity (R.O.E) for each company

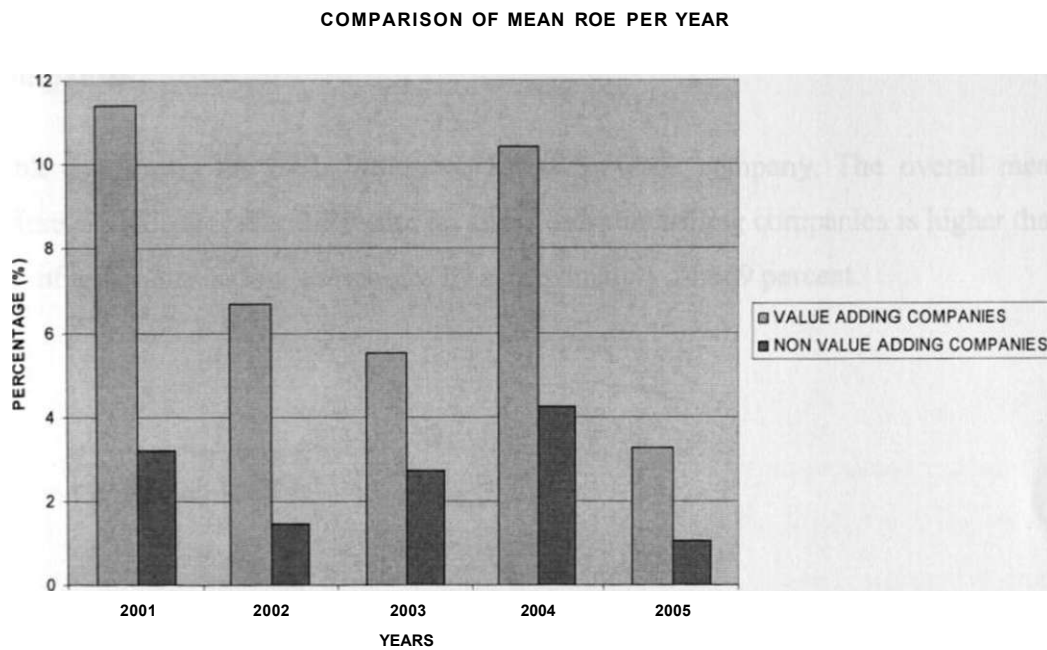
VALUE ADDING COMPANIES		NON VALUE ADDING COMPANIES		PERCENTAGE(%) DIFFERENCE
BL	10.542	ATL	3.224	
CTBL	10.136	AFTL	1.414	
CROWN	15.778	ATEL	2.914	
WILLIAM	5.098	AEL	3.230	
KTDA	3.384	ARML	1.512	
KTP	5.406	CA	1.196	
MPL	14.422	DKL	2.098	
STAC	-2.718	GML	1.414	
UTK	5.078	JCEL	2.350	
		K	1.430	
		KTC	2.496	
		KETE	2.510	
		LAB	4.248	
		LTCL	7.822	
		MJC	4.342	
		ME	2.070	
		TANJAL	2.876	
		MKCL	1.778	
		NVEAL	0.496	
		RTKL	3.178	
		RTL	2.136	
		SIEC	1.160	
MEAN	7.458	MEAN	2.541	65.929
VARIANCE	33.749	VARIANCE	2.361	

Table 4.2 and Graph 4.1 show the mean ROE for the five year period for the two categories of companies. It is evident from the graph that the ROE for value adding companies remains higher than for those companies that did not engage in value addition throughout the study period.

Table 4.2: Mean return on equity per year

YEAR	VALUE ADDING COMPANIES	NON VALUE ADDING COMPANIES	PERCENTAGE DIFFERENCE
2001	11.404	3.208	
2002	6.68	1.451	
2003	5.522	2.736	
2004	10.431	4.254	
2005	3.254	1.054	
MEAN	7.458	2.541	65.929
VARIANCE	11.609	1.704	

Graph 4.1: Comparisons of mean R.O.E per year for value adding and non value adding companies



Finally a chi-square test Table 4.2.1 was conducted to test the significance of the difference of return on equity for companies that engaged in value addition and those that did not engage in value addition. For each category the companies with above average returns on equity were counted from the total population sampled. The table below shows the information.

Table 4.2.1: Chi square computation for return on equity (R.O.E)

	ABOVE AVERAGE	SAMPLE SIZE	PERCENTAGE INTERVIEWED	EXPECTED FREQUENCY
VALUE ADDING COMPANIES	8	9	29.032	9.000
NON VALUE ADDING COMPANIES	6	22	70.968	22.000
TOTAL		31	100	31

The null hypothesis H_0 is that profitability is independent of value addition. The chi-square value obtained was 11.747 whereas the critical value for 1 degree of freedom (d.f) at 5% level of significance was 3.84. The null hypothesis is thus rejected. Hence the alternative hypothesis is accepted that profitability is dependent on value addition.

4.2.2 R.O.A Relationship between Value Adding and Non Value Adding Companies

Table 4.3 shows the mean return on assets for each company. The overall mean difference indicates that the return on assets on value adding companies is higher than that of non value adding companies by approximately 74.669 percent.

Table 4.3: Mean return on asset (R.O.A) for each company

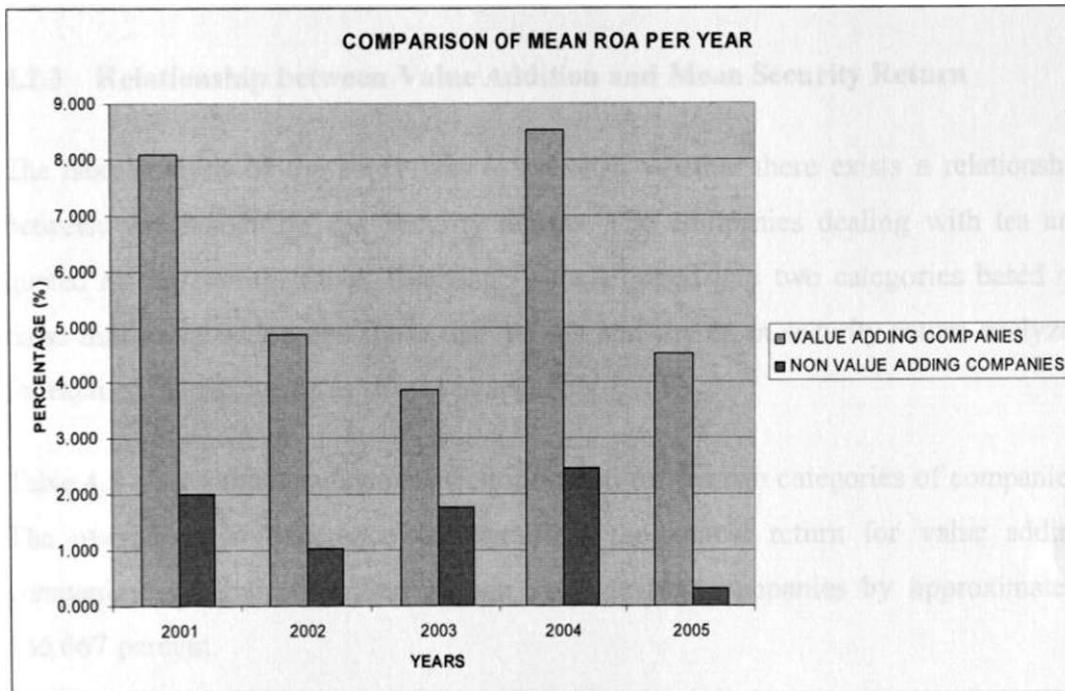
VALUE ADDING COMPANIES		NON VALUE ADDING COMPANIES		PERCENTAGE(%) DIFFERENCE
BL	6.350	ATL	0.430	
CTBL	7.864	AFTL	0.592	
CROWN	11.168	ATEL	1.056	
WILLIAM	3.398	AEL	1.474	
KTDA	2.418	ARML	0.598	
KTP	6.070	CA	0.782	
MPL	9.644	DKL	0.822	
STAC	2.290	GML	0.746	
UTK	4.592	JCEL	1.196	
		K	0.838	
		KTC	1.782	
		KETE	2.572	
		LAB	2.350	
		LTCL	5.572	
		MJC	2.092	
		ME	2.058	
		TANJAL	2.438	
		MKCL	1.594	
		NVEAL	(0.090)	
		RTKL	2.508	
		RTL	1.292	
		SIEC	0.596	
MEAN	5.977	MEAN	1.514	74.669
VARIANCE	9.866	VARIANCE	1.407	

Table 4.4 and Graph 4.2 show the mean ROA for the five year period for the two categories of companies. It is evident from the graph that the ROA for value adding companies remains higher than for those companies that did not engage in value addition throughout the study period.

Table 4.4: Mean return on asset (R.O.A) per year

YEAR	VALUE ADDING COMPANIES	NON VALUE ADDING COMPANIES	PERCENTAGE DIFFERENCE
2001	8.097	2.004	
2002	4.881	1.026	
2003	3.871	1.767	
2004	8.534	2.460	
2005	4.502	0.309	
MEAN	5.977	1.514	74.669
VARIANCE	4.711	0.722	

Graph 4.2: Comparison of mean R.O.A per year for value adding and non value adding companies



Finally a chi-square test (Table 4.4.1) was conducted to test the significance of the difference of return on assets for companies that engaged in value addition and those that did not engage in value addition. For each category the companies with above average returns on assets were counted from the total population sampled. The table below shows the information.

Table 4.4.1: Chi square computation for return on asset (R.O.A)

	ABOVE AVERAGE	SAMPLE SIZE	PERCENTAGE INTERVIEWED	EXPECTED FREQUENCY
VALUE ADDING COMPANIES	9	9	29.032	9
NON VALUE ADDING COMPANIES	7	22	70.968	22
TOTAL		31	100	31

The null hypothesis H_0 is that profitability is independent on value addition. The chi-square value obtained was 25.111 whereas the critical value for 1 degree of freedom (d.f) at 5% level of significance was 3.84. The null hypothesis is thus rejected. Hence the alternative hypothesis is accepted that profitability is dependent on value addition.

4.2.3 Relationship between Value Addition and Mean Security Return

The next analysis of the study was to establish whether there exists a relationship between value addition and security returns. The companies dealing with tea and quoted at the Nairobi Stock Exchange were grouped into two categories based on those that value added and those that did not and the mean security return analyzed for each of the five years as shown in appendix 7.

Table 4.5 shows the mean annual security return for the two categories of companies. The overall mean difference indicates that the annual return for value adding companies is higher than that of non value adding companies by approximately 186.667 percent.

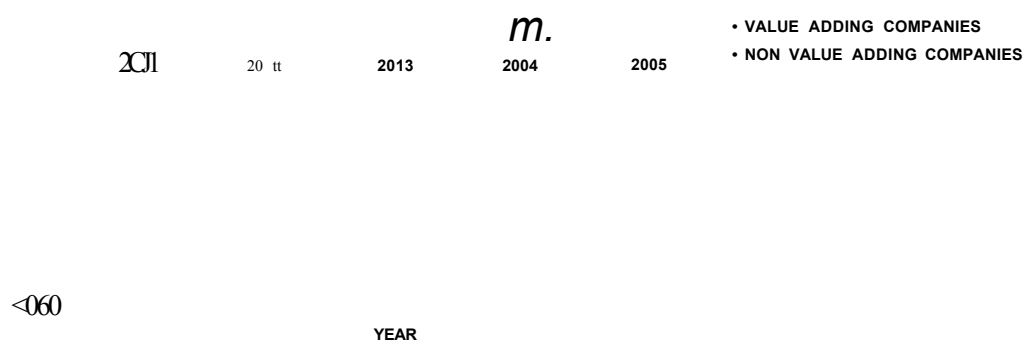
Table 4.5: Mean annual security return

YEAR	VALUE ADDING COMPANIES	NON VALUE ADDING COMPANIES	PERCENTAGE DIFFERENCE
2001	-0.030	-0.023	
2002	0.050	-0.050	
2003	0.017	-0.017	
2004	0.030	0.007	
2005	0.010	0.020	
MEAN	0.015	-0.013	186.667
VARIANCE	0.001	0.001	

Graph 4.3 shows the mean annual security return for the five year period for the two categories of companies. It is evident from the graph that the annual security return for value adding companies remains higher than for those companies that did not engage in value addition throughout the study period.

Graph 4.3: Comparison of mean annual security returns for value adding and non value adding companies

COMPARISON OF MEAN ANNUAL SECURITY RETURNS



Finally a chi-square test (Table 4.5.1) was conducted to test the significance of the difference of security returns for companies that engaged in value addition and those that did not engage in value addition. For each category the companies with above

average security returns for companies were counted from the total population sampled. The table below shows the information.

Table 4.5.1: Chi square computation for security returns for companies

	ABOVE AVERAGE	SAMPLE SIZE	PERCENTAGE INTERVIEWED	EXPECTED FREQUENCY
VALUE ADDING COMPANIES	2	3	50	3
NON VALUE ADDING COMPANIES	0	3	50	3
TOTAL		6	100	6

The null hypothesis H_0 is that profitability is independent on value addition. The chi-square value obtained was 3.333 whereas the critical value for 1 degree of freedom (d.f) at 5% level of significance was 3.84. The null hypothesis however cannot be accepted because the registered tea companies in the Nairobi Stock Exchange (NSE) are too few for any statistical decisions.

The Yates correction for continuity was therefore incorporated to correct the small sample size and a value of 4.167 was obtained. Whereas the critical value for 1 degree of freedom (d.f) at 5% level of significance was 3.84 the null hypothesis is thus rejected and the alternative hypothesis accepted that profitability is dependent on value addition.

4.3 Summary of Findings

The analysis of data in the tables and graphs discussed in the previous sections show that the companies that engaged in value addition perform better than those that did not engage in value addition over the five year period. The performance is higher by between 65 % and 76% while for the quoted companies in the Nairobi Stock Exchange it is higher by 186%. This difference is significant as proven by the test of significance carried out.

However, although the profitability of companies engaged in value addition is better than that of non value adding companies, there is a general inconsistency in profitability for both groups of companies. This can be explained by the commodity price fluctuations within the tea markets in Kenya and overseas markets over the five year study period.

CHAPTER FIVE

5.0 CONCLUSION, LIMITATION AND RECOMMENDATIONS

5.1 Conclusion

From the results of data analysis and findings in chapter four, it is evident that value adding companies have a higher return on shareholders' wealth than the non value adding companies by an average of 65% to 75%, a difference which is significant.

The return on equity remained higher for the value adding companies than those that did not value add over the five year period. This supports the findings that value addition is more beneficial to a company by Arunajatesan and Balaji (2004). Mohanty (2006) indicated that profit margins from processed food exports including semi-processed food products are more than those for primary food products in Asia and Pacific. The return on asset equally followed this trend for the same period, while the security returns for companies listed in the Nairobi Stock Exchange registered an impressive 186% improvement in profitability for those companies that engaged in value addition.

Investors, shareholders and managers when faced with decisions on whether to change their firms to offer value added products must weigh any potential benefit of profitability against the potential costs involved. Athukora (2004) observed that the capacity of Asian countries to penetrate the markets of developed countries depends on their ability to meet increasingly more stringent food safety standards imposed by developed countries. Cato (1998) estimated that the cost to upgrade sanitary conditions in the Bangladesh frozen shrimp industry to satisfy the European Union and the United States hygiene requirements was estimated at US\$ 17.6 million in 1997 to 1998. However the financial benefits and returns for such organizations that

incorporate value addition was much better than for those organizations that did not value add.

In conclusion therefore, we can say that value addition has a strong relationship with improved profitability and companies wishing to improve profitability will benefit a lot if they pursue value adding techniques which are numerous.

5.2 Limitation of Study

The data used for the study was for only five years. Most companies which were not listed at the Nairobi Stock Exchange did not have data readily available to the public but most of it could be found from their end of year booklets and news letters. A number of new companies entered the industry during the same period of study while a few others stopped operating. This also affected the study. The new entrants together with the de-listed ones during the study period were identified and excluded from the analysis. The financial ratios used relied on the financial statements which are subject to variations in the accounting method used.

5.3 Recommendations for Further Research

A study may be carried out in future to cover a longer period of time, say ten years especially from 2000 onwards. The study compared the financial performance of value adding companies and those that were not value adding over a period of five years. Another study may also compare the performance of the value adding companies and those that are not value adding before value adding was initiated to establish the impact of value adding on financial performance.

Further research is necessary to establish the impact of value adding on other industries such as the dairy industry, meat and fish industries.

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APPENDIX 2

LIST OF COMPANIES INVOLVED IN VALUE ADDING TEA

1. Bico Ltd
2. Continental Tea Blendes Ltd
3. Crown Tea Ltd
4. George Williamson
5. Global Tea and Commodities
6. James Finlay (Kenya) Ltd
7. Kenya Tea Development Agency
8. Kirindo Tea Packers
9. Mombasa Packers Ltd
10. Sasini Tea and Coffee
11. Unilever Tea Kenya Ltd

LIST OF COMPANIES NOT INVOLVED IN VALUE ADDING TEA

12. Abbas Traders Ltd
13. Aftiam Trading Ltd
14. Afribridge Trade Exporters Ltd
15. Al-Emir Ltd
16. Alibhai Ramji (Msa) Ltd
17. Cofftea Agencies
18. Devchand Keshavji K Ltd
19. Eastern Produce Kenya Ltd
20. Gacal Merchant Ltd
21. Juja Coffee Exporters Ltd
22. Kakuzi
23. Kapchorua Tea Co.

24. Karirana Estates Ltd
25. Ken-Elbagara Tea Exporters
26. Kiptagich Tea
27. L.A.B International Kenya Ltd
28. Limuru Tea Co. Ltd
29. M.J. Clarke Ltd
30. Maymum Enterprises
31. Mombasa Coffee Ltd (Tanjali)
32. Mt. Kenya Coffee Ltd
33. Newstar Ventures EA Ltd
34. Ranfer Teas K Ltd
35. Riotana Trading Ltd
36. Shakab Imports Exports Co.
37. Sotik Highlands Tea Estate
38. Sotik Tea Company Ltd
39. Stansand Africa Ltd
40. Van Rees Bv.

APPENDIX 2

KEY INSTITUTIONS IN THE TEA INDUSTRY

1. The Tea Board of Kenya

Established in 1950 under the Tea Act (Cap 343) of the laws of Kenya is mandated to regulate the tea industry in all aspects of tea growing, research, manufacture, trade and promotion in both the local and the international markets. The Board also disseminates information relating to tea and advises the Government on all policy matters regarding the tea industry through the Ministry of Agriculture.

2. Tea Research Foundation of Kenya (TRFK).

Is the technical arm of the Tea Board of Kenya. With a mandate to carry out research on tea and advise growers on the control of pests and diseases, improvement of planting material, general husbandry, yields and quality. The Foundation has so far developed and released to growers over 45 well-adapted clones.

3. Kenya Tea Development Agency (KTDA),

Previously a state corporation was incorporated as a private company in June 2000. KTDA Ltd. currently manages 54 tea factories in the smallholder sub-sector serving over 400,000 growers.

4. Kenya Tea Growers Association (KTGA).

Established by large-scale tea producers to promote the common interest of the members in the cultivation and manufacture of tea and to promote good industrial

relations and sound wage policies for the workers. The plantation sub-sector maintains 39 tea factories.

5. Nyayo Tea Zones Development Corporation (NTZDC).

A State Corporation established to manage the tea belts around the forest zones planted to create buffer zones meant to protect the Natural forests from human encroachment.

6. East African Tea Trade Association (EATTA),

Umbrella body bringing together tea Producers. Brokers. Buyers and Packers and is the auspices under which the Mombasa Tea Auction is conducted.

APPENDIX 3

ROE AND ROA FOR VALUE ADDING COMPANIES FOR THE PERIOD 2001 TO 2005

YEAR	2001	2002	2003	2004	2005
BICO LTD					
ROE	10.61	5.62	4.85	15.25	16.38
ROA	4.24	2.88	1.66	10.33	12.64
CONTINENTAL TEA BLENDERS LTD					
ROE	8.55	10.24	12.86	8.15	10.88
ROA	6.35	8.22	9.65	6.64	8.46
CROWN TEA LTD					
ROE	18.25	16.65	16.88	12.45	14.66
ROA	12.01	10.25	9.85	12.28	11.45
GEORGE WILLIAMSON					
ROE	15.62	4.27	-2.74	1.35	6.99
ROA	9.96	2.83	-1.82	0.91	5.11
EPS					10.08
DPS					0.50
MSR	-0.02	0.18	0.06	-0.05	0.01
ROE	12.22	10.65	10.45	14.65	18.86
ROA	6.85	5.12	4.86	12.15	14.55
KENYA TEA DEVELOPMENT AGENCY					
ROE	3.45	-2.93	2.68	5.31	8.41
ROA	2.26	-1.92	1.86	3.71	6.18
EPS	310	-217.75	193.18	405.95	660.57
DPS	170	0	100	150	150
KIRINDO TEA PACKERS					
ROE	8.44	11.45	10.85	-2.46	-1.25
ROA	10.85	9.44	10.28	-0.14	-0.08
MOMBASA PACKERS LTD					
ROE	20.01	16.25	12.44	15.36	8.05
ROA	12.24	10.16	8.55	11.85	5.42
SASINI TEA AND COFFEE					
ROE	12.28	-5.21	10.25	26.75	-37.16
ROA	10.46	-1.45	-7.26	20.33	-10.63
EPS	0.97	0.00	-8.00	19.00	-11.00
DPS	0.50	0.40	0.00	2.40	0.00
MSR	-0.05	0.00	0.01	0.03	0.02
UNILEVER TEA KENYA LTD					
ROE	5.43	3.78	2.13	11.72	2.33
ROA	4.50	3.52	2.07	10.90	1.97
EPS	4.57	2.54	1.27	7.39	1.41
DPS	2.00	2.50	6.00	8.00	2.00
MSR	-0.02	-0.01	-0.02	0.04	0.00

APPENDIX 4

**ROE AND ROA FOR NON VALUE ADDING COMPANIES FOR THE PERIOD
2001 TO 2005**

	2001	2002	2003	2004	2005
ABBAS TRADERS LTD					
	4.25	0.15	-0.03	5.25	4.75
	2.16	0.06	-0.25	0.02	0.16
AFHAM TRADING LTD					
	3.28	1.17	0.06	0.01	2.55
	1.56	0.85	-0.21	-0.02	0.78
AFRIBRIDGE TRADE EXPORTERS LTD					
	3.28	3.21	1.15	0.85	3.68
	2.01	1.07	0.89	0.06	1.25
AL-EMIR LTD					
	4.45	4.05	2.06	2.75	2.84
	1.65	2.01	1.05	1.01	1.65
ALIBHAI RAMJI (MSA) LTD					
	3.05	1.56	-1.56	2.06	2.45
	1.85	0.66	-0.95	0.45	0.98
COFFTEA AGENCIES					
	2.15	-0.05	0.15	1.65	2.08
	1.14	-0.01	0.05	1.08	1.65
DEVCHAND KESHAVJI K LTD					
	3.16	1.87	1.56	1.85	2.05
	1.20	0.56	0.45	0.75	1.15
GACAL MERCHANT LTD					
	2.85	1.25	-0.06	1.05	1.98
	1.65	0.56	-0.01	0.58	0.95
JUJA COFFEE EXPORTERS LTD					
ROE	4.25	2.15	0.65	1.85	2.85
ROA	2.85	1.05	0.08	0.75	1.25
KAKUZI					
ROE	0.55	0.35	5.33	12.95	-12.03
ROA	0.35	0.22	3.20	6.72	-6.30
EPS					-3.02
MSR	-0.03	-0.06	0.02	0.05	0.02
KAPCHORUA TEA CO					

ROE	3.25	2.78	3.15	3.65	-0.35
ROA	3.01	2.65	2.05	2.45	-1.25
MSR	-0.01	1.82	-0.02	-0.01	-0.01

KEN-ELBAGARA TEA EXPORTERS

ROE	2.15	2.85	3.65	1.85	2.05
ROA	2.45	2.65	3.86	2.15	1.75

L.A.B INTERNATIONAL

ROE	0.85	0.45	6.44	10.85	2.65
ROA	0.66	0.25	3.05	6.64	1.15

LIMURU TEA CO. LTD

ROE	1678	-10.36	14.65	30.25	-12.21
ROA	10.85	-6.21	9.45	22.33	-8.56
EPS				16.10	-5.27
DPS				15.00	5.00
MSR	-0.03	3.37	-0.05	-0.02	0.00

M.J. CLARKE

ROE	1.24	5.65	6.22	5.45	3.15
ROA	0.25	2.45	2.86	3.15	1.75

MAYMUM ENTERPRISES

ROE	1.85	2.05	2.45	1.65	2.35
ROA	3.05	2.25	1.98	1.26	1.75

MOMBASA COFFEE LTD (TANJAL)

ROE	2.85	4.05	3.84	1.56	2.08
ROA	2.45	4.56	4.08	0.25	0.85

MT. KENYA COFFEE LTD

ROE	1.68	2.45	2.85	0.46	1.45
ROA	2.05	2.15	2.24	0.85	0.68

NEWSTAR VENTURES EA LTD

ROE	0.95	0.45	0.16	-0.07	0.85
ROA	0.35	0.09	0.06	-1.04	0.09

RANFER TEAS K LTD

ROE	4.05	3.84	2.65	2.48	2.87
ROA	4.52	3.55	2.05	1.18	1.24

RIOTANA TRADING LTD

ROE	0.75	2.45	2.16	2.77	2.55
ROA	0.08	1.24	1.45	1.87	1.82

SHAKAB IMPORTS EXPORTS CO

ROE	.1.25	-0.44	2.66	2.28	2.55
ROA	-2.05	-0.08	1.45	1.64	2.02

APPENDIX 5

ROE PER COMPANY PER YEAR FOR VALUE ADDING COMPANIES

YEAR	2001	2002	2003	2004	2005	AVERAGE
BL	10.61	5.62	4.85	15.25	16.38	10.542
CTBL	8.55	10.24	12.86	8.15	10.88	10.136
CROWN	18.25	16.65	16.88	12.45	14.66	15.778
WILLIAM	15.62	4.27	-2.74	1.35	6.99	5.098
KTDA	3.45	-2.93	2.68	5.31	8.41	3.384
KTP	8.44	11.45	10.85	-2.46	-1.25	5.406
MPL	20.01	16.25	12.44	15.36	8.05	14.422
STAC	12.28	-5.21	-10.25	26.75	-37.16	-2.718
UTK	5.43	3.78	2.13	11.72	2.33	5.078
AVERAGE	11.404	6.680	5.522	10.431	3.254	7.458

ROA PER COMPANY PER YEAR FOR VALUE ADDING COMPANIES

YEAR	2001	2002	2003	2004	2005	AVERAGE
BL	4.24	2.88	1.66	10.33	12.64	6.350
CTBL	6.35	8.22	9.65	6.64	8.46	7.864
CROWN	12.01	10.25	9.85	12.28	11.45	11.168
WILLIAM	9.96	2.83	-1.82	0.91	5.11	3.398
KTDA	2.26	-1.92	1.86	3.71	6.18	2.418
KTP	10.85	9.44	10.28	-0.14	-0.08	6.070
MPL	12.24	10.16	8.55	11.85	5.42	9.644
STAC	10.46	-1.45	-7.26	20.33	-10.63	2.290
UTK	4.50	3.52	2.07	10.90	1.97	4.592
AVERAGE	8.097	4.881	3.871	8.534	4.502	5.977

APPENDIX 6

ROE PER COMPANY PER YEAR FOR NON VALUE ADDING COMPANIES

YEAR	2001	2002	2003	2004	2005	AVERAGE
ATL	6.00	0.15	-0.03	5.25	4.75	3.224
AFTL	3.28	1.17	0.06	0.01	2.55	1.414
ATEL	5.68	3.21	1.15	0.85	3.68	2.914
AEL	4.45	4.05	2.06	2.75	2.84	3.230
ARML	3.05	1.56	-1.56	2.06	2.45	1.512
CA	2.15	-0.05	0.15	1.65	2.08	1.196
DKL	3.16	1.87	1.56	1.85	2.05	2.098
GML	2.85	1.25	-0.06	1.05	1.98	1.414
JCEL	4.25	2.15	0.65	1.85	2.85	2.350
K	0.55	0.35	5.33	12.95	-12.03	1.430
KTC	3.25	2.78	3.15	3.65	-0.35	2.496
KETE	2.15	2.85	3.65	1.85	2.05	2.510
LAB	0.85	0.45	6.44	10.85	2.65	4.248
LTCL	16.78	-10.36	14.65	30.25	-12.21	7.822
MJC	1.24	5.65	6.22	5.45	3.15	4.342
ME	1.85	2.05	2.45	1.65	2.35	2.070
TANJAL	2.85	4.05	3.84	1.56	2.08	2.876
MKCL	1.68	2.45	2.85	0.46	1.45	1.778
NVEAL	0.95	0.45	0.16	0.07	0.85	0.496
RTKL	4.05	3.84	2.65	2.48	2.87	3.178
RTL	0.75	2.45	2.16	2.77	2.55	2.136
SIEC	-1.25	-0.44	2.66	2.28	2.55	1.160
AVERAGE	3.208	1.451	2.736	4.254	1.054	2.541

ROA PER COMPANY PER YEAR FOR NON VALUE ADDITION COMPANIES

YEAR	2002	2003	2004	2005	2006	AVERAGE
ATL	2.16	0.06	-0.25	0.02	0.16	0.430
AFTL	1.56	0.85	-0.21	-0.02	0.78	0.592
ATEL	2.01	1.07	0.89	0.06	1.25	1.056
AEL	1.65	2.01	1.05	1.01	1.65	1.474
ARML	1.85	0.66	-0.95	0.45	0.98	0.598
CA	1.14	-0.01	0.05	1.08	1.65	0.782
DKL	1.20	0.56	0.45	0.75	1.15	0.822
GML	1.65	0.56	-0.01	0.58	0.95	0.746
JCEL	2.85	1.05	0.08	0.75	1.25	1.196
K	0.35	0.22	3.20	6.72	-6.30	0.838
KTC	3.01	2.65	2.05	2.45	-1.25	1.782
KETE	2.45	2.65	3.86	2.15	1.75	2.572
LAB	0.66	0.25	3.05	6.64	1.15	2.350
LTCL	10.85	-6.21	9.45	22.33	-8.56	5.572
MJC	0.25	2.45	2.86	3.15	1.75	2.092
ME	3.05	2.25	1.98	1.26	1.75	2.058
TANJAL	2.45	4.56	4.08	0.25	0.85	2.438
MKCL	2.05	2.15	2.24	0.85	0.68	1.594
NVEAL	0.35	0.09	0.06	-1.04	0.09	-0.090
RTKL	4.52	3.55	2.05	1.18	1.24	2.508
RTL	0.08	1.24	1.45	1.87	1.82	1.292
SIEC	-2.05	-0.08	1.45	1.64	2.02	0.596
AVERAGE	2.004	1.026	1.767	2.460	0.309	1.514

APPENDIX 7

COMPUTATION OF MEAN RETURNS OF SHARES

2001

Company		January				Feb.				Mar.		
AGRICULTURAL		Po	P1	Div	R	Po	P1	Div	R	Po	P1	Div
1	Brooke Bond Ltd Ord 10 0	97 00	98.00	-	0.01	98 00	104 00		0.06	104 00	104 00	
2	Kakuzi Ord 5 00	55 00	52.00	-	(0.05)	5500	4800		(0.13)	48 00	45 00	
3	Sasini Tea & Coffee Ltd Or	34 00	32 00	-	(0.06)	35 00	3500			34 00	33 00	1.25
ALTERNATIVE INVESTMENT MARKET SEGMENT												
4	George Williamson Kenya	97.00	97 50		0.01	96 00	98 00		0.02	98 00	100.00	
5	Kapchorua Tea Co Ltd Or<	150 00	150.00			150 00	150 00			150 00	140 00	
6	Limuru Tea Co Ltd Ord 20	650 00	650.00	-	-	650.00	650 00	-	-	650 00	650 00	

2002

Company		Jan.				Feb.				Mar.		
AGRICULTURAL		Po	P1	Div	R	Po	P1	Div	R	Po	P1	Div
i	brooke Bond Ltd Ord 10 01	/200	62.00		(0.14)	6200	62.50		0.01	62 50	63.50	
2	Kakuzi Ord 5 00	36 00	36.00			36 00	36 00		.	36 00	30.00	
3	Sasini Tea & Coffee Ltd Or	15 90	16.05		0.01	15.70	14 85	1.25	0.03	14 85	15 00	0.25
ALTERNATIVE INVESTMENT MARKET SEGMENT												
4	George Williamson Kenya	6600	51.00		(0.23)	51.00	51 00		-	51.00	48.00	
5	Kapchorua Tea Co Ltd On	137.00	137 00		(0.23)	137.00	137.00		-	137 00	137 00	
6	Limuru Tea Co Ltd Ord 20	394 00	394 00			394 00	394 00		-	394 00	394.00	

2003

Company		Jan.				Feb.				Mar.		
AGRICULTURAL		Po	P1	Div	R	Po	P1	Div	R	Po	P1	Div
1	Brooke Bond Ltd Ord 10 0	7200	62 00		(0.14)	62 00	62 50		0.01	62 50	63.50	
2	Kakuzi Ord 5 00	36 00	36 00			36 00	36.00		.	36.00	30.00	
3	Sasini Tea & Coffee Ltd Or	15 90	1605		0.01	15 70	14 85		(0.05)	14 85	15.00	
ALTERNATIVE INVESTMENT MARKET SEGMENT												
4	Williamson Tea Kenya Ltd	4375	67 00		0.53	67 00	61.00		(0.09)	61 00	68.00	
5	Kapchorua Tea Co Ltd Or<	137 00	137 00			137 00	137 00		-	137.00	137.00	
6	Limuru Tea Co Ltd Ord 20	394 00	394 00		-	394 00	394.00		-	394 00	394 00	

2004

Company		Jan.				Feb.				Mar.		
AGRICULTURAL		Po	P1	Div	R	Po	P1	Div	R	Po	P1	Div
1	Brooke Bond Ltd Ord 10.0C	66 00	55.50		(0.16)	56 50	68.50		0.21	67 00	74.00	
2	Kakuzi Ord 5 00	24 00	24.50		0.02	24 00	2500		0.04	2500	24 00	
3	Sasini Tea & Coffee Ltd Or	20 00	17 90		(0.11)	1800	17.70		(0.02)	17.70	17.35	
ALTERNATIVE INVESTMENT MARKET SEGMENT												
4	Williamson Tea Kenya Ltd	83 50	82 50		(0.01)	82 50	81 50		(0.01)	81 50	80 00	
5	Kapchorua Tea Co Ltd On	105 00	10500			10500	105 00		-	105 00	100.00	
6	Limuru Tea Co Ltd Ord 20	16000	160 00			160 00	171 00		0.07	171.00	171 00	

2005

Company		Jan.				Feb.				Mar.		
AGRICULTURAL		Po	P1	Div	R	Po	P1	Div	R	Po	PI	Div
1	Unilever Tea Kenya Ltd Or	90 50	95 50		0.06	95 50	116.00		0.21	116 00	104 00	
2	Kakuzi Ord 5 00	4000	4325		0.08	4325	48 50		0.12	49 00	40 25	
3	Sasini Tea & Coffee Ltd Or	26 25	30 00		0.14	30 00	30.5		0.02	2825	30.25	
ALTERNATIVE INVESTMENT MARKET SEGMENT												
4	Williamson Tea Kenya Ltd	100 00	117 00		0.17	117.00	115 00		(0.02)	115.00	118 00	
5	Kapchorua Tea Co. Ltd Or	100 00	100 00			100 00	100.00			100 00	100.00	
6	Limuru Tea Co Ltd Ord 20	355 00	35500		-	35500	355.00		-	35500	355.00	

R	Ajr.			May				June				R	Po
	Po	P1	Div	R	Po	P1	Div	R	Po	P1	Div		
	104 00	97 00		(0.07)	97 00	99 00		0.02	99 00	101 00		0.02	101 00
L (000)	4500	40 00		(0.11)	40 00	40-75		0.02	40 75	40 00		(0.02)	40 00
0.01	33 00	30 00		(0.09)	30.00	29 00		(0.03)	29 00	26 75	0 75	(0.05)	26 75
0.02	100 00	100 00		-	100 00	106 00		0.06	106 00	104 00		(0.02)	105.00
(007)	140 00	140 00		-	140 00	140.00			140 00	140 00			140 00
.	650 00	650 00		-	650.00	650 00			650 00	640 00		(0.02)	640 00

R	Ajr.			May				June				R	Po
	Po	P1	Div	R	Po	P1	Div	R	Po	P1	Div		
0.02	62 50	57 00		(0.09)	57.00	56 50	2 00	0.03	56 50	56 50		.	56 50
(0.17)	30 00	30 00			30 00	29 00		(0.03)	29 00	28.00		(0.03)	28 00
0.03	1500	1500		.	15.00	13 25		(0.12)	13.25	1500	0 50	0.17	15 00
(0 06)	48 00	43 50		(0.09)	43.50	4200		(0.03)	4200	41 25		(0.02)	41 25
	137.00	137 00			137.00	137 00			137 00	137.00			137 00
-	394 00	394 00			394 00	394 00			394 00	394 00		.	394 00

R	Apr.			May				June				R	Po
	Po	P1	Div	R	Po	P1	Div	R	Po	P1	Div		
0.02	62.50	57 00		(0.09)	57.00	56 50	2 50	0.04	56 50	56 50		.	77.00
(0.17)	30 00	30 00			30.00	2900		(0.03)	29.00	28 00		(0.03)	19.85
0.01	15.00	15 00			15.00	13.25		(0.12)	13.25	15.00		0.13	20.00
0.11	70.00	74 50		0.06	81 50	10800		0.33	108 00	84 00		(0.22)	84 00
.	137 00	137 00			137.00	137 00		-	137 00	105.00		(0.23)	10500
-	394 00	394 00			394 00	394 00		-	394 00	394 00		-	394 00

R	Apr.			May				June				R	Po
	Po	P1	Div	R	Po	P1	Div	R	Po	P1	Div		
0.10	70.00	69 50		(0.01)	69.50	6200	6 00	(0.02)	62 00	70.50		0.14	70 50
(0.04)	24 00	23 00		(0.04)	21 75	22 50		0.03	22 50	29 00		0.29	29 00
(0.02)	17.50	17 00		(0.03)	16 90	25 03		0.48	25 00	19.55	1.00	(0.18)	19 50
(0 02)	8000	82 50		0.03	82 00	86 53		0.05	86 50	90 50		0.05	90 50
(0.05)	100 00	100.00			100 00	100 03			100 00	100 00			100 00
	171.00	171 00			21000	231 03	1000	0.15	231 00	231 00		.	231 00

R	Apr.			May				June				R	Po
	Po	P1	Div	R	Po	P1	Div	R	Po	P1	Div		
12J01	104 00	105 00		0.01	106 00	11500		0.08	115.00	115 00		.	117.00
(OH)	40 50	45 50		0.12	45 75	46 00	1 00	0.03	46 00	54 00		0.17	57 00
0.07	30 00	32 50		0.08	32 50	33 50		0.03	31 00	33.75		0.09	34 25
0.03	119 00	118 00		(0.01)	118.00	11800		.	118.00	146 00		0.24	145 00
	100 00	114 00		0.14	114 00	126 00		0.11	126 00	185 00		0.47	185 00
.	35500	360 00		0.01	360 00	365 00		0.01	365 00	36500		-	365 00

2001

July			Aug.			Sept			Oct.				
P1	Div	R	Po	P1	Div	R	Po	P1	Div	R	Po	P1	Div
10100		-	101.00	97 50		(0.03)	97 50	92 00		(0.06)	88 50	91 50	
37 50		(0.06)	36.00	35 00		(0.03)	34 00	34 00		-	34 00	37.00	
26 75			26 75	25 00		(0.07)	25 00	1960		(0.22)	19 60	1905	
102 00	500	0.02	102 00	100 00		(0.02)	100 00	95 00		(0.05)	95 00	96.00	
145 00	2 50	0.05	145 00	143 00		(0.01)	143 00	140 00		(0.02)	140 00	14000	
540 00		-	640 00	640 00		-	64000	400 00		(0.38)	400 00	400 00	

2002

July			Aug.			Sept			Oct				
P1	Div	R	Po	P1	Div	R	Po	P1	Div	R	Po	P1	Div
55 00		(0.03)	55.00	54 00		(0.02)	54 00	46 50		(0.14)	46 50	43.00	
24 75		(0.12)	24 75	16 05		(0.35)	16 05	15 50		(0.03)	15 50	15.50	
13 50		(0.10)	13.50	13.75		0.02	13 75	13.20		(0.04)	13.20	1270	
36 00	0.50	(0.12)	36 00	32 50		2.81	32 50	24 00		(0.82)	24 00	25.00	
137 00	0 50	0.00	137.00	137 00		-	137 00	137.00		-	137 00	137.00	
394 00			394 00	394.00		-	394 00	394 00		-	394 00	394.00	

*

			Aug.			Sept			Oct				
P1	Div	R	Po	P1	Div	R	Po	P1	Div	R	Po	P1	Div
74 00		(0.04)	74.00	73 00		(0.01)	7300	70 00		(0.04)	70.00	72.00	
20.00		0.01	20.00	29 00		0.45	2800	18 10		(0.35)	18.10	2825	
20 00		-	20.00	19.00		(0.05)	18 75	17.30		(0.08)	17 30	24.00	
90 00	3.75	0.12	93.00	89 50		(0.04)	89 50	87 00		(0.03)	87 50	86 00	
105 00	3.75	0.04	105.00	105 00		-	105.00	105 00		-	105 00	105.00	
394 00		-	394 00	394 00		-	394 00	394 00		-	394 00	394 00	

2004

July			Aug.			Sept			Oct				
P1	Div	R	Po	P1	Div	R	Po	P1	Div	R	Po	P1	Div
73 50		0.04	73.50	80 00		0.09	80 00	82 00		0.03	82 00	92 50	200
29 25		0.01	2925	29 00		(0.01)	29 00	28 00		(0.03)	28 25	3250	
17 85		(0.08)	17.85	19 70		0.10	19 85	20 25		0.02	20.50	23.50	
90 00	3.75	0.04	90 00	89 50		(0.01)	89 50	88 50		(0.01)	88 50	90.00	
100.00	3.75	(0.06)	100 00	100 00		-	100.00	100 00		-	100.00	100.00	
236 00		0.02	236 00	236 00		-	236 00	360.00		0.53	360 00	355.00	5 00

2005

July			Aug.			Sept			Oct				
P1	Div	R	Po	P1	Div	R	Po	P1	Div	R	Po	P1	Div
11500		(0.02)	116 00	104 00		(0.10)	104 00	90 00		(0.131)	90 00	97.00	
57 50		0.01	54 50	54 50		-	5500	46 00		(0.16)	46 00	50 00	
38 25		0.12	38 00	33 75		(0.11)	33.75	33.00		(0.02)	32 50	32.25	
130 00	5 00	(0.07)	13000	120 00		(0.08)	120 00	115.00		(0.04)	115 00	105.00	
185 00	500	0.03	18500	185 00		-	185 00	156 00		(0.16)	156 00	156.00	
365 00		-	36500	365 00		-	365 00	353 00		(0.03)	353.00	347.00	

R	Nov.			R	Dec.			MEAN
	Po	P1	Div		Po	P1	Div	RETURNS
0.03	91.50	90.00		(0.02)	90 00	7200		(0.02)
0.09	37.00	37.00			37.00	36 00		(0.03)
(003)	19.10	18 00		(0.06)	17.70	15 90		(0.10)
0.01	96 00	80.00		(0.17)	77.00	66 00		(0.14)
	140.00	137.00		(0.02)	137.00	137.00		(0.01)
	400 00	400.00			400 00	394 00		(0.02)

R	Nov.			R	Dec.			MEAN
	Po	P1	Div		Po	P1	Div	RETURNS
(0.08)	43 00	43.75		0.02	43 75	54 00		0.23
-	15 30	1440		(0.06)	14 40	14 65		0.02
(0 04)	12.70	13.45		0.06	13 45	13.60		0.01
0.04	27 50	43 00		0.56	43 00	43 75		0.02
	137 00	137.00			137.00	137 00		(0.09)
	394 00	394 00			394 00	394 00		

R	Nov.			R	Dec.			MEAN
	Po	P1	Div		Po	P1	Div	RETURNS
0.03	72 00	68 50		(0.05)	68 50	66 00		(0.04)
0.56	28 00	24.00		(0.14)	24 00	24 00		0.02
0.39	24 00	20.00		(0.17)	20 00	20.00		-
(002)	86 00	86 00			86 00	83 50		(0.03)
	10500	105.00			105 00	105 00		-
-	394 00	160.00		(0.59)	160.00	160 00		-

R	Nov.			R	Dec.			MEAN
	Po	P1	Div		Po	P1	Div	RETURNS
0.15	92 50	92.00		(0.01)	92 00	90 50		(0.02)
0.15	33 25	32 75		(0.02)	32 75	40 00		0.22
0.15	23 50	22 00		(0.06)	22 00	26 25		0.19
0.02	92 50	100 00		0.08	100 00	100 00		-
	100 00	100 00			100.00	100 00		-
	355 00	355 00			355 00	35500		-

R	Nov.			R	Dec.			MEAN
	Po	P1	Div		Po	P1	Div	RETURNS
0.08	96 00	94 00		(0.02)	91.00	90 50		(0.01)
009	49 25	47 25		(0.04)	48 00	48 25		0.01
(001)	32 00	32 25		0.01	32 25	27.25		(0.16)
[0.09]	105 00	103 00		(0.02)	103 00	105 00		0.02
-	156 00	154.00		(0.01)	154 00	154.00		-
(0.02)	347 00	347 00		-	347.00	347 00		-

APPENDIX 8

EPS FOR VALUE ADDING COMPANIES FOR THE PERIOD 2001 TO 2005

YEAR	2001	2002	2003	2004	2005	Mean
Unilever Tea Kenya Ltd	-0.02	-0.01	-0.02	0.04	0.00	-0.002
SasiniTea	-0.05	0.00	0.01	0.03	0.02	0.002
Williamson Tea K Ltd	-0.02	0.16	0.06	0.02	0.01	0.046
Mean	-0.030	0.050	0.017	0.030	0.010	0.015

EPS FOR NON VALUE ADDING COMPANIES FOR THE PERIOD 2001 TO 2005

YEAR	2001	2002	2003	2004	2005	Mean
Kakuzi	-0.03	-0.06	0.02	0.05	0.02	0.000
Kapchorua Tea Co.	-0.01	-0.09	-0.02	-0.01	0.04	-0.018
Limuru Tea Co.	-0.03	0.00	-0.05	-0.02	0.00	-0.020
Mean	-0.023	-0.050	-0.017	0.007	0.020	-0.013