

**University of Venda**

**Economic analysis of value addition on tea: A case study of the Mukumbani/Tshivhase tea estate, Vhembe District, Limpopo province**

by

**Bokosi James**

**(11576120)**

**A research dissertation submitted in partial fulfilment of the requirements of the Masters of Science in Agricultural Economics (MScAEC)**

for

**Department of Agricultural Economics and Agribusiness**

**School of Agriculture**

**University of Venda**

**Thohoyandou**

**Supervisor: Dr E.N Raidimi**

**Co-Supervisor: Mr T.K Pfumayaramba**

**August, 2013**

**UNIVEN LIBRARY**

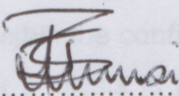
**Library Item : 20141283**



**© University of Venda**

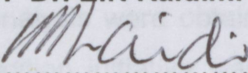
### Declaration

I, **James Bokosi**, student number **11576120**, hereby declare that this research proposal for the award of the Masters of Science in Agricultural Economics (MScAEC) degree at the **University of Venda**, hereby submitted by me, has not previously been submitted for a degree at this or any other university/institution and that it is my own work in design and in execution and that all reference materials contained therein have been duly acknowledged.

Signature..... 

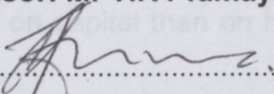
Date..... 06/02/2014

**Supervisor: Dr. E.N Raidimi**

Signature..... 

Date..... 06/02/2014

**Co-supervisor: Mr T.K Pfumayaramba**

Signature..... 

Date..... 06/02/2014

This study seeks to determine the costs and benefits associated with the value-addition process at Tshivhase/ Mukumbani tea estate, Vhembe District, Limpopo province of South Africa. Tshivhase/ Mukumbani tea estate was under precarious economic conditions and in its endeavour to revamp its operations; the estate adopted the value-addition process. The major aim of this study is to determine whether the value-addition activity is a sound investment decision by reviewing the costs incurred and the benefits accrued when the activity was adopted. Cost benefit analysis is a strategy or formula for evaluating the potential for any type of operation or project within the confines of the company or organisation. The main purpose of a cost benefit analysis is to ascertain if conducting a project, activity or operation is feasible, given the current circumstances of the organisation. With regard to tea, manufacturers may add value by blending, branding or packaging the tea before selling it to consumers. To assess the viability of the initiative, the Net Present Value (NPV) and the benefit cost ratio (BCR) were used. The time series primary data used for the analysis were obtained during 2005-2012 period. The results show that the value addition initiative was not viable for the period under review. Using a 10% discount rate, the NPV and BCR were found to be -69281681.19 and 0.380647627 respectively. This entails that the initiative is not viable and therefore there is need for the tea estate to revise its strategies. The identified challenges include high input costs, high minimum wages and stiff competition. One of the strategies could be investing on capital than on human capital since labour contributes 60% of its total costs.

**Key words:** Benefit cost ratio, net present value, profitability index, strategies, tea, value addition

## Acknowledgements

Table 2.1: Tea producing estates versus tea non-producing estates ..... 14

My sincere gratitude goes to the Almighty. He has always held my hand throughout the project. He is the greatest supervisor and when an individual is placed under Him all will be well. The project was handed into His hands at the beginning and He has been faithful to be consulted at any time, seven days a week, twenty four hours a day.

I would also like to express my gratitude towards the following individuals and Institutions:

Dr Edzisani Nelson Raidimi and Mr T.K Pfumayaramba for showing interest and taking over to supervise and co-supervise my studies respectively, when my first supervisor, Prof. Stephen Oni had retired. Without their intervention this thesis might have never materialised.

Prof Stephen Oni for his unwavering support and also encouraging that nothing is impossible until it has been tried.

Land bank and the University of Venda for their generous sponsorship of my studies

Prof. Edward Nesamvuni and Mr Ushe Masunda for assisting in data analysis. This made an impact to my research.

Mr Topham Toppies and the Late Mr Donald Mudau, Mr Richard Thagwana and Mr Phumulani Magidi (LEDA) for the invaluable information and data they supplied.

Last but not least, my sincerest appreciation to my wife Anza, and the little 'angels' Tanaka (Mardora) and Wadzanai (Aimee) who gave me hope and insight when I was engaged in this study. Not to forget my mum who has been there for me in bad and good times. Their sacrifice love and encouragement meant a lot to me.

## List of Figures

|  |    |
|--|----|
| Figure 1: A map of Mukumbani/ Tshivhase tea estates (Adapted from Google Earth 2012) | 26 |
| Figure 2: Distribution of Benefits and costs, 2005-2012 .....                        | 35 |
| Figure 3: Made tea quarterly figures from 2006-2012 .....                            | 36 |

BCA- Benefit Cost Analysis

BCR- Benefit Cost Ratio

CBA- Cost Benefit Analysis

CF- Cash flow

DAPP- Department of Agriculture Forestry and Fisheries

DEAT- Department of Environmental Affairs and Tourism

ERS- Economic Research Service

IRR- Internal rate of return

MS- Microsoft

NPV- Net present value

PI- Profitability Index

PV- Present Value

ROI- Return on investment

SAAB- South African Breweries

TEB- Tea Board of Kenya

TEMA- Tea Marketing Southern Africa

UN- United Kingdom

UN- United States

USAID- United States Development Agency

WORLD BANK

## List of Acronyms

|  |    |
|--|----|
| ARR- Average rate of return                            | 1  |
| BCA- Benefit Cost Analysis                             | 11 |
| BCR- Benefit Cost Ratio                                | 14 |
| CBA- Cost Benefit Analysis                             | 14 |
| CF- Cash flow  | 1  |
| DAFF- Department of Agriculture Forestry and Fisheries | 1  |
| DEAT- Department of Environmental Affairs and Tourism  | 1  |
| ERS- Economic Research Service                         | 2  |
| IRR- Internal rate of return                           | 2  |
| MS- Microsoft  | 3  |
| NPV- Net present value                                 | 3  |
| P.I- Profitability Index                               | 3  |
| PV- Present Value                                      | 4  |
| ROI-Return on investment                               | 4  |
| SAB- South African Breweries                           | 4  |
| TBK- Tea Board of Kenya                                | 5  |
| TMSA- Trade Mark Southern Africa                       | 6  |
| UK- United Kingdom                                     | 6  |
| US- United States                                      | 6  |
| USDA- United States Development Agency                 | 6  |
| ZAR- South African Rand                                | 7  |

|                                       |     |
|---------------------------------------|-----|
| Literature review .....               | 7   |
| 2.1 Introduction .....                | 7   |
| Declaration.....                      | i   |
| Abstract.....                         | ii  |
| Acknowledgements .....                | iii |
| List of Tables .....                  | iv  |
| List of Figures .....                 | v   |
| List of Acronyms .....                | vi  |
| Chapter 1 .....                       | 1   |
| Introduction .....                    | 1   |
| 1.1 Background of the study .....     | 1   |
| 1.2 Problem statement.....            | 2   |
| 1.3 Objectives of the study.....      | 3   |
| 1.3.2 General objectives .....        | 3   |
| 1.3.3 Specific objectives .....       | 3   |
| 1.4 Hypothesis of the study.....      | 3   |
| 1.5 Research questions .....          | 3   |
| 1.6 Significance of the study .....   | 4   |
| 1.7 Explanation of key concepts ..... | 4   |
| 1.7.1 Cost Benefit analysis .....     | 4   |
| 1.7.2 Value addition .....            | 4   |
| 1.7.3 Tea .....                       | 5   |
| 1.7.4 Branding .....                  | 5   |
| 1.7.5 Packaging.....                  | 5   |
| 1.7.6 Key informant interview.....    | 6   |
| 1.7.7 Interview guide.....            | 6   |
| 1.8 Scope of the study .....          | 6   |
| 1.9 Structure of the study .....      | 6   |
| Chapter 2.....                        | 7   |

|   |    |
|---|----|
| Literature review .....   | 7  |
| 2.1 Introduction.....   | 7  |
| 2.2 An exposition of the terms "Added value" and "Value added"..... | 7  |
| 2.2.1 Added value.....  | 7  |
| 2.2.2 Value added .....   | 7  |
| 2.3 Forms of value addition to tea.....                             | 9  |
| 2.4 Why do businesses engage in value addition?.....                | 9  |
| 2.5 Value Addition to tea: Global Context .....                     | 11 |
| 2.5.1 Sri Lanka .....   | 11 |
| 2.5.2 India.....  | 12 |
| 2.5.3 Vietnam .....   | 12 |
| 2.6 Value addition to tea: Regional Context .....                   | 12 |
| 2.6.1 Kenya .....   | 12 |
| 2.6.2 Malawi .....  | 13 |
| 2.7 Value addition to tea: Local Context.....                       | 14 |
| 2.7.1 South Africa .....  | 14 |
| 2.7.2 Limpopo Province .....  | 15 |
| 2.7.3 Tshivhase Tea Estates .....                                   | 16 |
| 2.8 Cost Benefit Analysis (CBA) in farm decision-making .....       | 17 |
| 2.8.1 Types of CBA.....   | 18 |
| 2.8.2 The CBA method of evaluation and its application .....        | 19 |
| 2.8.3 Critics of the cost benefit analysis .....                    | 22 |
| 2.8.4 Discount rate.....  | 23 |
| 2.9 The value of value-addition activities .....                    | 24 |
| Chapter 3.....  | 25 |
| Methodology .....   | 25 |
| 3.1 Introduction.....   | 25 |
| 3.2 Study area .....  | 25 |
| 3.3 Data collection methods.....                                    | 26 |



|   |   |    |
|---|---|----|
| 3.3.1                                     | Sampling techniques.....  | 26 |
| 3.3.2                                     | Primary data .....  | 26 |
| 3.3.3                                     | Secondary data.....   | 27 |
| 3.3.4                                     | Data Capturing and analysis .....   | 27 |
| 3.4                                       | Ethical consideration.....  | 30 |
| Chapter 4.....                            |   | 32 |
| Results and Discussion.....               |   | 32 |
| 4.1                                       | Introduction.....   | 32 |
| 4.2                                       | Comparison of the costs and benefits of the value added initiative. ....          | 32 |
| 4.3                                       | Sensitivity analysis.....   | 38 |
| 4.4                                       | Challenges faced by the tea estate in adapting the value addition processes ..... | 39 |
| 4.4.1                                     | Lack of markets .....   | 39 |
| 4.4.2                                     | Too much control by the government .....  | 40 |
| 4.4.3                                     | Stiff competition .....   | 40 |
| 4.4.4                                     | High input costs .....  | 41 |
| 4.5                                       | Strategies on improving or increasing the returns of value addition on tea.....   | 41 |
| 4.5.1                                     | Open market distribution and processing channels.....                             | 44 |
| 4.5.2                                     | Direct marketing.....   | 44 |
| 4.5.3                                     | Conventional Marketing .....  | 45 |
| 4.5.4                                     | Niche Marketing.....  | 45 |
| Chapter 5.....                            |   | 47 |
| Summary, Discussions and Conclusions..... |   | 47 |
| 5.1                                       | Introduction.....   | 47 |
| 5.2                                       | Summary and Discussions.....  | 47 |
| 5.2.1                                     | Economic analysis of the value addition initiative.....                           | 47 |
| 5.2.2                                     | Challenges faced by the tea estate in adopting the value addition initiative. ... | 47 |
| 5.2.3                                     | Strategies for improving or increasing the returns of value addition on tea.....  | 48 |
| 5.3                                       | Conclusions .....   | 49 |
| 5.3.1                                     | Economic analysis of the value addition on tea.....                               | 49 |

|       |   |    |
|-------|---|----|
| 5.3.2 | Challenges faced by the tea estate in adopting the value addition initiative. ... | 49 |
| 5.3.3 | Strategies for improving or increasing the returns of value addition on tea.....  | 50 |
| 5.4   | Limitations to the study .....  | 50 |
| 5.4.1 | Time .....  | 50 |
| 5.4.2 | Resources .....   | 50 |
| 5.4.3 | Other challenges.....   | 50 |
| 5.5   | Policy implications.....  | 51 |
| 5.6   | Future Research Opportunities .....   | 51 |
| 5.7   | Summary and Discussions.....  | 51 |
|       | References .....  | 53 |
|       | Appendix A: Key informant interview guide .....                                   | 59 |

## Chapter 1

### Introduction

This chapter features the background, research problem, explanations of key concepts, significance of the study, the objectives, research questions and the scope of the study.

#### 1.1 Background of the study

Agricultural value-added initiatives have been recognised as a way to assist farmers to understand the shocks brought about by globalisation (Coltrain, Barton, & Boland, 2000). The pursuit of agricultural value-added initiatives may be seen as a strategic response to the increased competition in the agricultural sector and the rapid commoditization of its products (Amanor-Boadu, 2000). Factors influencing the commoditization of agricultural products include increasing consumer demand for convenient, ready- to-eat / drink or cook, safe and nutritious food products and their willingness to pay premiums for such service-embedded products (ERS/USDA, 2002).

The concept of value-addition in agriculture, in the developing economies is widely becoming an acceptable strategy adopted by both government and non-governmental organisations towards improving the income generation of the small holder farmers and the rural communities (Ja afar- Furo, Bello, & Sulaiman, 2011). Although interest in value-added agriculture has been increasing, it is a concept that is poorly understood by many producers, policy makers and even academics. The paucity of understanding comes from the fact that the concept has reached a cliché status in a relatively short time and has escaped the period of discussion and assessment necessary for ensuring effective comprehension (Amanor-Boadu, 2000).

The concept, has in recent years been used as a catch-all term, when people want to emphasize a perceived improvement in almost everything- from value-added accounting (South African Breweries, 2002) to value-added public relations (Harris, 1998). Thus value added branding is conceived as superior to plain branding (Nilson,

1998). In the context of tea, value-added tea is expected to be better than ordinary tea.

In this study, value addition is viewed as those activities that add value to the product by transforming it from a raw product to a consumer-ready product. This includes local processing of tea into different kinds, branding, packaging and marketing.

Tea growing in South Africa was started in 1964. The two sister estates, Tshivhase and Mukumbani, are tea estates that are producing tea in the Limpopo province. The former has existed since 1977 and the latter came into being ten years later (Limpopo Business, 2007). The offices, tea estates and the tea processing factory are all based in the Thulamela municipality of the Vhembe District, Limpopo Province (Limpopo Business, 2009). In 2006 they merged as Venteco (Pty) and traded as Tshivhase tea estates.

From the beginning, the two estates, sold their tea in bulk at auctions. In 2009, the Tshivhase tea estates adopted the concept of value addition resulting in the tea estate producing Midi tea range spearheaded by Midi Premium Blend Black Tea. The two major brands that were involved in value-added activities include Black tea and Rooibos tea. Black tea is processed into Midi tagless tea bags, Midi gold tagged tea bags and midi loose tea (tea leaf).

This study is about the cost benefit analysis of value addition to tea at Venteco (Pty), trading as Tshivhase tea estates.

## 1.2 Problem statement

Tshivhase and Mukumbani tea estates are some of the tea estates producing tea in the Limpopo province. Since these tea estates were established, tea was sold at auctions in its raw form, in bulk, and usually sold at a price below the cost of production. This strategy of selling tea without processing made these estates unprofitable as they could not raise enough capital to re-engage in the next season and the incomes realised through such transactions were extremely inadequate. Later, the two tea estates adopted the concept of value addition in 2009. The adoption of this concept was after the tea estates had suffered adverse economic conditions such as high minimum wage rates, low world market prices for black tea,

high import costs, the weakening of the rand against the US dollar and the UK Pound Sterling. Value addition was seen as offering strategies for transforming an unprofitable enterprise into a profitable one. From a study that was carried out in Hawaii, value addition was seen as critical to the long term survival of a vast number of small farmers (Fleming, 2005).

The 1077ha Tshivhase/Mukumbani tea estates now also consist of Mukumbani processing, packaging and branding factory. Mukumbani processing meant to spearhead the process of value addition at the tea estate. This study seeks to analyze the costs and benefits of this value addition on tea, so as to determine if it is a sound investment decision or not.

### **1.3 Objectives of the study**

#### **1.3.2 General objectives**

The general objective is to determine the cost and benefits of value addition on tea.

#### **1.3.3 Specific objectives**

The specific objectives of the study are as follows:

- i. To determine challenges faced by the tea estate in adopting the value addition process;
- ii. To evaluate whether the benefits of value addition outweigh its costs and by how much thus determining if whether it is a sound investment; and
- iii. To come up with strategies that will improve or increase the returns of value-addition on tea

### **1.4 Hypothesis of the study**

- i. The benefits of value addition outweigh its cost
- ii. The tea estate is facing challenges in adopting the value addition process
- iii. The returns of value addition on tea can be increased or improved

### **1.5 Research questions**

- i. Do the benefits of value-addition outweigh its costs and by how much?
- ii. What are the shortcomings of the value-addition processes?
- iii. What are the strategies for improving or increasing the returns of value addition?

## 1.6 Significance of the study

The study of economic analysis of value addition on tea contributes to the knowledge of tea farming. It increases the knowledge base on how best the concept can be integrated into a farming setup. In addition, the cost benefit analysis on value addition processes will go a long way as a decision-making tool to farmers who want to implement the concept of value addition.

## 1.7 Explanation of key concepts

This research is underpinned by the following key terms:

### 1.7.1 Cost Benefit analysis

Cost-benefit analysis (CBA), sometimes called 'benefit-cost analysis' (BCA), is a systematic process for calculating and comparing benefits and costs of a project, decision or government policy (Boardman, 2006).

It is a technique used to decide whether to make a change or not. It takes into account all of the costs that will be incurred and benefits that the organization will accrue from taking a certain course of action. The associated costs are then subtracted from the value of the benefits it hopes to receive. Shim & Siegel, (1989), cited by Linn, (2011), note that CBA is used "to determine whether the favourable results of an alternative are sufficient to justify the cost of taking that alternative."

### 1.7.2 Branding

In simpler words, it is a technique designed to determine the feasibility of a project or a plan by quantifying its costs and benefits. If the benefits outweigh the costs, then the action makes sense. Since the cost benefit analysis relies on the addition of positive factors and the subtraction of negative ones to determine a net result. It is also known as 'running the numbers' (Linn, 2011).

### 1.7.2 Value addition

Value-adding is the process of adding value to a product. It involves taking the product into different levels and various forms. Value-added agriculture involves the processing of food and non-food (raw materials), thus adding value to a food product

(Ware, 1999). It is the transformation of raw agricultural commodities into consumer-ready food products. It includes local processing, packaging, or marketing, which adds value to raw agriculture products. Value addition also refers to the process by which value is added to raw material so that the good is closer to, or, is a finished product before entering the market. With regard to value-added tea, manufacturers may add value by blending, branding or packaging the tea before selling it to consumers. Small farms involved in value-added agriculture can make creative combinations of products, by-products, processing, and markets. The addition of value can result from the application of the farmer's own time, management, skills, and resources to make products with less capital expenditures and purchased inputs, as well as from the sale of products of higher intrinsic value for consumers who are willing to pay more for quality. Examples of value added tea include; tagless tea bags and loose tea bags

### 1.7.3 Tea

Tea is an evergreen plant of the *Theaceae* family that is native to China, Tibet and northern India. It comes from the tropical plant known as the *Camellia Sinensis* and it is the world's mostly widely consumed beverage. Tea plants are propagated from seed or by cutting. It takes approximately 4 to 12 years for a tea plant to bear seed, and about 3 years before a new plant is ready for harvesting (Choudhury, 2006).

### 1.7.4 Branding

The practice of creating a unique name for a product and giving marketing support to that name. Such a name may or may not be supported by the company's name. (Baker, 1985).

### 1.7.5 Packaging

It is the covering or wrapping of a product so as to look appealing to the consumer. The easiest area to consider regarding "adding value" is surface design; in the sense that if a label or pack has to be printed with something, the image may as well show something excellent; the best it can possibly be (Baker, 1999).

### **1.7.6 Key informant interview**

Key informant interview is a loosely structured conversation with people who have specialised knowledge about the topic the researcher wishes to understand. The term also refers to anyone who can provide detailed information and opinion based on his or her knowledge of a particular issue. Key informant interviews let the researcher to explore a subject in depth. The give and take of these interviews can result in the discovery of information that would not have been revealed in a survey (www.oasas.ny.gov, 2009).

### **1.7.7 Interview guide**

An interview guide is a list of leading questions that will assist the researcher in provoking answers during the interview. The questions are set out in a sequence, which may be varied for individual respondents according to their responses to earlier questions (Baker, 1985).

## **1.8 Scope of the study**

This research is a case study of the Mukumbani and Tshivhase tea estates. These two estates are the ones which are currently producing tea in the Limpopo province and have adopted the concept of value addition.

## **1.9 Structure of the study**

The study is divided into five chapters. Chapter one as shown above gives the introduction of the study. It covers the background, the research problem, explanation of key concepts, significance of the study, objectives, research questions, and the structure of the study. Chapter two contains literature review of various sources. Literature reviewed includes discussions within global, regional and local contexts. Subsequently, the methodological framework adopted for the study is presented in Chapter three. The results and discussion are delineated in chapter four. The final chapter (Chapter five) summarises the study with reference to the objectives and research questions (outlined in chapter one). The chapter also brings up the strategies that may improve or increase the returns on value addition on tea and finally suggestions and recommendations for future research.

## Literature review

### 2.1 Introduction

Tshivhase tea estates in the Limpopo province have made a major contribution in the South African tea industry. In a process of the tea estates' revitalisation, the Tshivhase tea estates made a decision to erect a tea processing factory. This was meant to process tea (value addition) into various forms before it reaches the final consumer. This decision was made as part of the government's overall goal to revitalize tea estates.

This chapter discusses value addition on tea at global, regional and local context.

### 2.2 An exposition of the terms "Added value" and "Value added"

#### 2.2.1 Added value

Economists have long measured the term 'added value' using the metric value added. This is the difference between the value of shipments and the cost of all purchased inputs used in the production (Wolfe, 1999). At a firm level, value added is defined as the gross value of output less purchased inputs and contract labour. At the industry level, it is divided into two values: gross value added and net value added. Gross value added is the value of an industry's output of goods and services less the value of intermediate consumption of goods and services while net value added is the value of output less the values of both intermediate and fixed capital consumption (Ial, 1999).

#### 2.2.2 Value added

Current literature use the term as a concept not as the metric value. It is used more as an adjective, modifying activities, processes or products. The concept of value addition in agriculture, in developing economies, is widely becoming an acceptable strategy adopted by both government and non-governmental organisations towards improving the incoming generation of the small holder farmers and the rural

communities (Ja afar- Furo et al., 2011). A review of the literature however, indicates that little or no attempt has been made to define the concept, much less present a way of evaluating how much difference it brings to the activities, processes and products it qualifies. Applying the concept to marketing, Nilson, (1998) noted that “the successful company must ensure that it is adding tangible and abstract values to the products and services it supplies, and in doing so ensuring that it is offering customers superior perceived value.” Applied to agriculture by ERS/USDA, (2002), value added agriculture occurs whenever a change in the physical state or form of an agricultural product or the adoption of a production method or handling process leads to an enhancement in the customer base for the product and a greater portion the consumer’s expenditure spent on the product accruing to the producer.

Value added is the process of adding value to a product. It involves taking the product to different levels and various forms. For farmers, value adding plays a significant role in offering the strategies for transforming an unprofitable enterprise into a profitable enterprise one (Fleming, 2005). Value-added agriculture involves the processing of food and non-food (raw materials), thus adding value to a product (Ware, 1999). It is the transformation of raw agricultural commodities to consumer-ready food products. It includes local processing, packaging, or marketing, which adds value to raw agriculture products. Value addition also refers to the process by which value is added to raw material so that the good is closer to, or, is a finished product before entering the market. With regard to value-added tea, manufacturers may add value by blending, branding or packaging the tea before selling it to consumers. Small farms involved in value-added agriculture can make creative combinations of products, by-products, processing, and markets. The addition of value can result from the application of the farmer’s own time, management, skills, and resources to make products with less capital expenditures and purchased inputs, as well as from the sale of products of higher intrinsic value for consumers who are willing to pay more for quality. Examples of value added tea include, tag-less tea bags, loose tea bags.

Using the ideas imbedded in the USDA description of value-added agriculture, one can define value added business initiatives as those in which particular members of a supply chain are rewarded for performing activities which so far had been

performed by downstream firms in the supply chain, or for performing activities that are deemed valuable but have thus far been overlooked by the supply chain (Amanor-Boadu, 2004). The size of the reward is directly proportional to the customer satisfaction brought about by the activity and not by the work or effort on the part of the performing organisation.

### 2.3 Forms of value addition to tea

Porter, (1985), introduces the concept of value addition for the strategic improvement of firms or industries. There are three methods by which values are added to tea. These are (i) breaking bulk and blending involving no technology but require skills that producers possess; (ii) consumer packing in attractive packets, cans or bags using modern packing materials, whether sold in other brand names (to draw attention towards marketing and promotional skills) and cost, or sold under own brand name (iii) product processing and qualitative improvement extracting tea soluble i.e., solids and flavour. The country which exports tea in bulk quantities without recourse to any value-added system is, therefore, not only deprived of legitimate share or value added but also fails to reach the consumer directly. The value added items of tea which are sold in the retail market, are in the forms of tea in consumer package and tea bags (Karmakar & Banerjee, 2005). Tea will generally reach the supermarket shelf within 20 to 30 weeks of leaving the farm. Tea is very labour intensive product and labour costs represent 55-60% of the total cost of production (Fleming, 2005).

### 2.4 Why do businesses engage in value addition?

For farmers value added plays a significant role in offering the strategies for transforming an unprofitable enterprise into a profitable one (Fleming, 2005). From the study that has been carried out in Hawaii, value added strategy was seen as critical to the long term survival of vast number of small farmers. Generally, farmers who grow and harvest their produce and then sell it unprocessed or as it is to a local processor, usually sell at a price below the cost of production. This kind of marketing plan is viable in the short run as the farmer would want to cover cash costs involved in the production of that crop, however, in the long run it is a poor strategy because it

does not cover the total costs of production and therefore it will not be sustainable (Fleming, 2005).

The reward for performing activities that have been hitherto performed by or are of value to others downstream in the supply chain may be higher prices, increased market share, increased market access and creation of new product lines. Amanor-Boadu, (2004), argues that if the total profitability of the performing organization is not higher with the value added activity, then the activity cannot be deemed to have contributed any value to the supply chain or to customers, and thus fails to qualify as a value-added activity. According to Chung, (1969), there is a need for value addition of a product since the familiarity with a service or product over time leads to a decline in the level of satisfaction that is achieved from its use even when the service or product itself does not change. This entails that over time, the willingness of customers to reward for the same service or product declines as their perception of the satisfaction generated by the product or service declines. However, it is not only perception of declining satisfaction that exerts pressure on the reward level for value-added products or service overtime.

Value addition is considered as an alternative production and marketing strategy requiring the understanding of food safety issues taking cognisance of the consumer preferences. Apart from improving the profit potentials of farmers, value addition in agriculture offers entrepreneurial farmers an opportunity to identify and pursue new crops and new markets. Value added on the farm is born out of the necessity to adapt a changing environment. It is market-driven and encompasses a vast range of activities designed to increase farm income and profit margins in a highly competitive, risky and segmented market. The notion of adding value on the farm has received considerable attention in recent years because it is seen as a way to rejuvenate the primary agricultural sector and provide a means of adapting to the various forces affecting agriculture. The strong social and economic importance of farming activities within the rural economy increases the significance of value-added agricultural initiatives, because the benefits spill over beyond the farm.

According to Amanor-Boadu, (2004) value addition poses the following advantages;

- Increase employment and revitalize rural communities;

- Reduce economic risk associated with trade activities ;
- Diversify the economic base of rural communities;
- Increase farmers' financial stability;
- Promote a culture of research and innovation;
- Reduce dependency on the world price of commodities;
- Increases opportunities for smaller farmers and companies through the development of niche market;
- Increase quality and brand recognition of regional and South African products and
- Promote collective solutions and partnership along the food value chain

## 2.5 Value Addition to tea: Global Context

### 2.5.1 Sri Lanka

Sri Lanka tea industry has made progress in expanding the value-added tea products. At present, Sri Lanka value-added tea exports include instant tea, tea bags, iced tea, green tea and organic tea (Saman, 2010). Sri Lanka provides more value to tea than any other tea-producing countries at auctions and within ports; this has seen Sri Lanka inclining towards the exporting of value-added tea. Sri Lanka receives a higher value than other competing countries because, instead of selling just black tea, the country exports herbal tea, flavoured tea and green tea as value-added tea (Ministry of Industry and Commerce, 2006).

Value addition of tea in Sri Lanka has proved to be a viable decision as the industry had faced a major downfall in the tea sector. Since the adoption of the value addition activities, its tea exports increased by 40%, in 2002 (Saman, 2010). The country was criticised for its exportation of bulk tea. Because of the nature in which the country used to dispose-off its tea, Sri Lanka lost its title of leading tea exporter to Kenya. Value-addition processes made Sri Lanka counter competition from its counterparts such as Vietnam, China and India. Currently, the tea industry is considered to be the third largest export sector accounting for over 13 per cent of the export earnings in 2009 (Saman, 2010).

## 2.5.2 India



India is one of the tea producing countries which recognises the importance of value addition and its benefits. In early 2005 the industry witnessed major companies in India withdrawing from production and concentrating on value-addition process which include packaging, branding and blending of tea (Wal, 2008). After carrying out the cost benefit analysis, the two major tea producing companies, such as Tata and HUL intended to focus on brand business and on exploring the market, rather than on the plantation business, which is a low margin business. Selling tea in its bulk form proved to be an unwise decision as the costs outweigh the benefits.

Assam tea also attests that value addition is an important decision to consider when producing tea. Although Assam tea is still earning 50% of foreign exchange earned by India's tea industry, it has suffered stiff competition and its demand has gone down due to quality tea supplied by countries like Sri Lanka, Cuba and many others at comparatively lower prices (Choudhury, 2006).

## 2.5.3 Vietnam

Much has not been done in terms of value addition of tea in Vietnam. Value-addition activities are not yet considered to be viable. The bulk of Vietnam tea is packaged, blended and branded by larger corporations which are foreign based.

Much of Vietnamese tea is sold for blending purposes, commonly to be mixed with higher quality teas from other areas. This has been a challenge for many Vietnamese tea enterprises as they lack the ability to add value through branding, which could greatly increase revenue. Instead, value is added to the product once it leaves the Vietnamese enterprises and goes to larger corporations, Lipton for example, where they are able to mix the tea and add additional value by giving the product the Lipton name (Wenner, 2011).

## 2.6 Value addition to tea: Regional Context

### 2.6.1 Kenya

Although, taxation and lack of industry support services such as packaging machinery and paper are some of the biggest impediments to value addition of

Kenyan tea exports, the benefits of value-added tea proved to outweigh its cost. The Kenyan government is planning to set up a special zone for processing and packaging tea to gain higher foreign income from the beverage (TMSA, 2011). Kenya has been unable to market her tea as a premium brand since it is exported in bulk and used for blending with poorer quality teas. In a bid to ensure that the benefits of value-added tea are enjoyed, the government is auditing exporting companies to guarantee that they export 100 per cent branded Kenya tea to world markets, especially the new ones in South Asia. The government has already audited 31 exporting companies (TMSA, 2011).

Value-added exports to Sudan, Yemen, the UK, and Somalia have been steadily growing (TMSA, 2011). This shows that there is a potential in the growth of tea industry if the product is value-added. In 2010 two supermarket chains based in the UK approached Tea Board of Kenya (TBK) to establish linkages with tea growers and exporters to value-add at the source. An analysis shows that Kenya exported 15 per cent more tea in volume than Sri Lanka in 2009 due to its value-added nature (TMSA, 2011).

## 2.6.2 Malawi

Malawi was the first country in Africa to grow tea on a commercial scale, which started at Mulanje in the 1880s (Wal, 2008). To date, large commercial estates account for 93 percent of production with the remainder grown by some 6,500 smallholders. Most of the estates are owned by foreign companies and are based in the districts of Mulanje and Thyolo, the country's principal tea growing regions. Ownership is concentrated among 11 companies, of which the largest is Eastern Produce Malawi (EPM), which owns 21 estates. The company is a subsidiary of the British public limited company, Camillia (Wal, 2008).

### 2.6.2.1 Malawi tea production and value addition

In terms of value-addition of tea, much has not been done. Most of the Malawian tea is sold unprocessed and as bulk tea. About one-third of Malawi's crop is sold through the Limbe Auction, with two-thirds sold direct. A high proportion of the tea is bought by major international companies such as Unilever and Lyons Tetley (Wal, 2008).

The biggest export destinations are the United Kingdom (UK) and South Africa. The colour and brightness of Malawi tea is a factor in its blending with leading British tea brands (Wal, 2008). The Malawian tea is processed and value-added by major importers.

## 2.7 Value addition to tea: Local Context

### 2.7.1 South Africa

From a study which was conducted by DAFF (2010) it was reported that only six out of the thirteen tea estates are currently under production while the rest of the tea estates have ceased producing. In the Vhembe region of the Limpopo Province only two are still producing. In KwaZulu-Natal as well as Mpumalanga Province, only one tea estate in each province is under production. In Eastern Cape Province two tea estates are reported to be still producing. A number of tea processors are concentrated in the Gauteng Province, City of Johannesburg despite the fact that tea is not produced there. This could be attributed by the infrastructural set up that makes it easier for exporting. Table 2.1 below summaries the scenario;

Table 2.1: Tea producing estates versus tea non-producing estates

| Estate            | Province     | Size (Ha)   | Status        |
|-------------------|--------------|-------------|---------------|
| Tshivhase Sapekoe | Limpopo      | 577         | Producing     |
| Mukumbani Sapekoe |              | 504         | Producing     |
| Grenshoek Sapekoe |              | 451         | Not Producing |
| Middelkop Sapekoe |              | 501         | Not Producing |
| Outgrowers        |              | 100         | Not Producing |
| Ngome Sapekoe     |              | 500         | Not Producing |
| Richmond Sapekoe  | KZN          | 522         | Not Producing |
| Ntingwe           |              | 325         | Producing     |
| Magwa             |              | 1784        | Producing     |
| Majola            | Eastern Cape | 385         | Producing     |
| Paddock           |              | 225         | Not Producing |
| Senteeko          | Mpumalanga   | 550         | Not Producing |
| Gradely           |              | 75          | Producing     |
| <b>Total</b>      |              | <b>6499</b> |               |

Source: (DAFF, 2010)

Realising the value of tea estates, value addition of tea is now becoming a growing concern in the country. For example, honey bush tea in Western Cape and in

certain areas of Eastern Cape has become a commercial crop with the production of more than 100 tons of processed tea per hectare (South Africa.info, 2008).

South Africa's tea industry has seen an improvement in the quality of tea and the establishment of export standards. This has come about due to the construction of a large processing and packaging facility in Mossel Bay, increased consumer awareness, the appearance of several brand names on supermarket shelves, and a growing overseas market (SouthAfrica.info, 2008).

In Kwazulu-Natal province, Ntingwe has also adopted the concept of value addition. From the beginning this tea estate used to sell its tea in an unprocessed form. Since the adoption of value-addition processes, the costs that the estate incurred are not limited to training of farm labourers, managers, administrators, infrastructural development and others but, the benefits accrued include high quality tea and high levels of income (SouthAfrica.info, 2008).

### 2.7.2 Limpopo Province

Most of the tea estates in the province have gone out of production. Out of five tea estates, only two are producing tea i.e. Mukumbani and Tshivhase tea estates (DAFF, 2010). The tea estates that have aborted their operations include Grenshoek Sapekoe, Middelkop Sapekoe and Outgrowers. Ever since the collapse of these tea estates, the government has devised some strategies to resuscitate the tea estates. Among other strategies, value-addition was seen to play a pivotal role in revitalising the tea estates.

In 2009 a feasibility study was conducted on how to revitalize the Grenshoek Sapekoe and the Middelkop Sapekoe tea estates which were originally run by Sapekoe until 2004; they are found in Greater Tzaneen Local Municipality, part of the Mopani District Municipality, located in the eastern part of the Limpopo Province. The municipal area includes the towns of Tzaneen, Nkowankowa, Lenyenye, Letsilele and Haenertsburg. Currently the tea estates are owned by the Makgoba Community Trust from the Makgoba tribe. The trust wants to develop appropriate, viable and sustainable business plans for both the tea estates with the assistance of an investor. It is recommended that the organic tea production should be combined with processing and packaging of various brands of tea, ice tea production and the

### 2.7.3 Tshivhase Tea Estates

The offices, tea estates and tea processing factory are all based in the Thulamela Local Municipality of the Vhembe District, Limpopo Province. Midi black tea is farmed and selectively handpicked from the two estates. It is then blended and packaged in the world class Mukumbani Tea processing factory. This has been extensively refurbished since June 2009, with new packing lines and new processing equipment installed. In 2006, Mukumbani and Tshivhase tea estates merged under Venteco or Tshivhase, umbrella. Venteco (Pty) Ltd trades as Tshivhase Tea Estates, the two tea estates where tea is farmed. The estate specialises in a wide range of tea products which include the golden range (superior blend), original range (loose tea bag), catering range (bigger pack) and the loose tea range.

#### 2.7.3.1 Tshivhase tea estate major brands

There are two major brands that are produced in Tshivhase tea estate (Tshivhase Tea Estates, 2009): Black tea- Midi Tagless Tea Bags; Black Tea- midi Gold tagged tea bags; Black tea- Midi loose tea (leaf tea) and Midi Rooibos tea.

##### 2.7.3.1.1 Midi Rooibos Tea

Rooibos is naturally caffeine free. It is made from the *Aspalathus Linearis* bush which is indigenous and unique to South Africa. Classified as herbal tea, Rooibos is known to have health benefits as it contains no additives, preservatives, flavourants or colourants. Rich in antioxidants and low in tannin, a substance which affects metabolism of the body and stops the absorption of iron and protein. Midi Rooibos is produced in Nieuwoudtville, Northern Cape Province. It is pasteurized, packaged and marketed by Tshivhase Tea Estates in Vhembe District, Limpopo Province (Tshivhase Tea Estates, 2009).

##### 2.7.3.1.2 Midi Gold Tea

It is handpicked to ensure that only the best leaves are used to provide top quality tea enjoyment. The tagged tea bags are made for convenience for preparing a cup

of tea. This format is also ideal for display at various events and guest accommodation establishments.



### 2.7.3.2 Black tea process

The Black tea process goes through the stages of withering, rolling, oxidation and drying or firing. Once the leaves are picked, they are left to wither for about a day. After this the leaves are soft enough to be rolled into balls; oils from the leaves are brought to the surface. These aromatic oils aid in the oxidation process, which last for a number of hours until the proper smell and colour are achieved.

Next is firing. This is the process of moving the leaves through hot air chambers to stabilize the leaves and lock in the flavour. The dry heat stops the fermentation process by killing the active enzymes. During this firing, the leaves turn dark and lose all but about 2% of their moisture (DAFF, 2010). If the firing is not done correctly, and the leaves are too dark, the result cup of tea will taste weak. The tea is now ready for packing. It is then dispatched into local and export markets (DAFF, 2010).

## 2.8 Cost Benefit Analysis (CBA) in farm decision-making

According to Hansjurgens (2004) cost benefit analysis is an economic method of choosing from a number of alternatives. If there is only one alternative, cost benefit analysis may be used to conclude whether or not such alternative should be implemented. Cost benefit analysis is a technique which can be used to appraise projects or activities within the business environment. It is used as a tool to rank alternatives or to choose the best alternatives (Department of Environmental Affairs and Tourism, 2004). As a norm, if the benefits are greater than the costs, the project, activity or alternative should be carried out. The benefits and costs of a particular project or activity are weighed up against each other and the project with the highest net value is then recommended (Hansjurgens, 2004). The recommendation offered by the Department of Environmental Affairs and Tourism (2004) is that the alternative should be accepted if the lifetime benefits outweighed the lifetime costs.

### 2.8.1 Types of CBA



There are numerous types of the cost benefit analysis (CBA) that can be used to assess the viability of a project, program or activity. Helfert (1997), points out that one method of conducting CBA is the hurdle rate which is a minimum standard for the return required of an investment, used in selecting from among alternative investment choices. This is the minimum gain that is to be expected from a satisfactory investment. This method was not used in this study because it does not have a formula and Linn (2011), also substantiates this fact.

The return on investment (ROI) was not used in this study as well. The reason being it does not have a clear definition; it is defined in numerous ways. It is calculated in two ways, which is almost the same as average rate of return (ARR) calculated as (ARR = average cash inflow/average amount invested) and accounting rate of return calculated as (accounting rate of return = return/investment). In addition, finance experts do not recommend the use of these (Linn, 2010), therefore it has little validity for this study. ROI can also be calculated in the same way as the internal rate of return (IRR). According to Argenti (1994), IRR is the discount rate at which the net present value ( i.e. the value of all future cash flows, in excess of the original investment, expressed in today's rands) of an investment equals zero. The IRR is the number that makes the formula correct when it is inputted for  $r$ . The answer is expressed as a percentage because it is an interest rate. Thus  $IRR = r$  in this formula (Linn M. , 2011):

$$0 = \sum_{t=0}^n \left( \frac{CF_t}{(1+r)^t} \right) \text{ Where,}$$

$t$  = time period

$CF_t$  = net cash flow at time  $t$ ,

$r$  = the discount rate per period, and

$n$  = the number of time periods.

The most critical way of conducting CBA is through the net present value (NPV). This study will employ this method as it is compatible with the type of data to be sorted. As a prerequisite of NPV, one must know what the present value (PV) is. Emery & Finnerty (1997), define present value as the amount of cash today that is equivalent in value to a payment, or to a stream of payments, to be received in the future. They further define NPV as the present value of the expected future cash flows minus the cost. Linn (2011), expressed the NPV formula in two ways, i.e.

$$NPV = \sum_{t=0}^n \left( \frac{CF_t}{(1+r)^t} \right), \text{ and}$$

$$NPV = CF_0 + \frac{CF_1}{(1+r)^1} + \frac{CF_2}{(1+r)^2} + \dots + \frac{CF_n}{(1+r)^n} \text{ where,}$$

$t$  = time period

$CF_t$  = net cash flow at time  $t$ ,

$r$  = the discount rate per period, and

$n$  = the number of time periods.

To determine the profitability of a project, program or activity, the profitability index (PI) is used. The profitability index, which is sporadically called the benefit cost ratio, provides the relative profitability of a project. Emery & Finnerty (1997), cited by Linn (2011), point out that the idea underlying the PI is to measure the project's "bang for the buck". The PI is acceptable if it is greater than 1.0, and the higher the PI, the higher the project, activity or program should be ranked when compared to other possible investments. The formula is given as follows:

$$PI = 1 + \frac{NPV}{\text{Initial investment}}$$

### 2.8.2 The CBA method of evaluation and its application

The choice of the CBA method influences the decisions of most farms and firms. It is of imperative that care should be practiced in process of the selection of the best

method of evaluation to be used. Some firms avoid the problem of rejecting a project that is not supposed to be rejected by using as many methods as possible.




In a study carried out by Linn (2011) both the NPV method and the IRR were used in deciding whether to purchase machines A & B or lease the machines. Three methods were used in determining the choices. Each machine was evaluated independently from the other. The results from the analysis indicated that machine A had an IRR of 6.86%, NPV of USD\$3500, Profitability index (PI) or Benefit Cost Ratio (BCR) of 1.37 and discounted payback period of 6.38 years. Machine B had an IRR of 5.50%, NPV of USD\$3600, PI of 1.327 and discounted payback period of 7.46 years. The leasing option gives an IRR of 4.79%, NPV of USD\$5.5, a PI of 1.28 and discounted payback period of 7.8. Machine A was chosen in a split decision and was chosen on the basis of IRR, PI and discounted payback period. In the analysis, according to NPV machine B had a small advantage. Machine A came in as the best option and giving it a large advantage. Linn (2011) did not use the payback period and instead the discounted payback period was used on the basis that payback period uses the cashflow as inputs and the the discounted uses the present value as the cash flows. In addition, the discounted payback period was used because it is an improved version of the payback period as it incorporates the time value of money. Linn (2011) avoided the use of one method of CBA in making decision, because this could result in a situation whereby a project can be rejected basing on one method and when evaluating with another method the project might be considered viable. For example in Linn (2011) analysis if only discounted payback period method was used, this could have raised the belief that the lease option is superior to that of purchasing Machine B.

Although it is imprudent to rely on only one method of CBA, some authors have used only one method in evaluation the projects. In most cases they use one method of CBA when assessing the viability of a project. For example Mosoma et al., (2012) used the NPV method and the Benefit cost Ratio (BCR) to determine the feasibility and viability of the dairy goat project in Mafele community, Limpopo province. The findings from the analysis were NPV of +8 869.21 and BCR of +3.08. They concluded that on the basis of NPV rule, the dairy goat project was economically viable because the NPV value positive and the BCR were greater than zero. They

therefore concluded that the goat keepers should invest in dairy goat since it was found to be economically viable.



In this study only the NPV method was used to determine the economic analysis of value addition. The NPV method of evaluation was chosen in light of its advantages or strengths over other types of CBA method of evaluation such as the IRR. In Linn (2011) article, the methods, i.e., the NPV, IRR and PI were used for mutually exclusive projects and for that reason it was realised that the methods might recommend different courses of action. Linn (2011), suggests that, for independent projects, activities or programs, all the three formulae should make the same recommendations. It is in that regard that the author preferred to use only one method since they all come to the same conclusion. However, apart from the methods arriving to the same end, other methods have flaws that might as well mislead in terms of decision making. Firstly NPV is a very simple and precise performance indicator. A positive NPV means that the project generates a net benefit. It is generally desirable either in financial terms or in economic terms. In contrast to NPV, Internal Rate of Return (IRR) must be used with caution because it is an indicator of the relative efficiency of an investment. With IRR if the sign of the net benefits, benefits minus costs, changes in the different years of the project's lifespan (e.g. - + - +) there may be multiple IRRs for a single project. In these cases the IRR decision rule is impossible to implement (European Commission Directorate Regional Policy, 2008). The researcher could not use IRR because it requires one to still compute the NPV. This fact was substantiated by (European Commission Directorate Regional Policy, 2008) that as IRR rankings can be misleading and given that the informational requirements for computing a proper NPV and IRR are the same except for the discount rate, it is worth calculating the NPV of a project. Moreover, the IRR contains no useful information about the overall economic value of a project. It therefore renders no use for the researcher to use the IRR method since the focus of the study is to analyse the economic viability of the value addition initiative. Other shortcomings of the IRR which were noted by European Commission Directorate Regional Policy, (2008) and noteworthy although were not considered when selecting the best method to use in this study are;

- 
- ❖ the sensitivity to economic life: when projects with different economic lives are to be compared, the IRR approach inflates the deliverability of a short-life project because IRR is a function both of the time period and of the size of capital outlay;
  - ❖ the sensitivity to the timing of benefits: when there are projects that fail to yield benefits for many years, the IRR tends to be lower compared to projects with a fairly even distribution of benefits over time, even though the Net Present Value of the former may be higher;
  - ❖ the IRR indicator cannot deal with cases in which time-varying discount rates are used. In these cases, the Net Present Value rule allows discount rate changes to be incorporated easily into the calculation

### 2.8.3 Critics of the cost benefit analysis

There are several critics revolving around the CBA as a method of evaluation. (Hansjurgens, 2004), criticised the method for prioritizing the efficiency rule over other rules. The efficiency rule states that if the net effects of costs are maximised, a project or activity is considered to be efficient (Zylicz, 1995). An emphasis was made by (Goodstein, 1999) that efficiency was not necessarily fair and might not be of much use when social outcomes were considered.

The CBA ignores the distribution related considerations (Hansjurgens, 2004), which means the beneficiaries of the costs and the benefits have to be identified. The arguments against the use of CBA also include the ethical consideration of weighing up human life and health against economic concerns (Hansjurgens, 2004).

Another criticism is the use of cost benefit analysis in the political decision making arena (Hansjurgens, 2004). To substantiate this argument CBA has an apparently on sided exertion of interests, a bias in favour of hard quantitative facts obtained from producers and consumers. In addition the sometimes lengthy process of data collection is also blamed for causing delays in the regulatory process and for confusing politicians with scientific jargon (Hansjurgens, 2004). Issues of the same nature were also examined by Goodstein (1999) which include 'hard numbers problem' and 'paralysis by analysis' as impacts on regulatory politics. Goodstein (1999) in his defence of the involvement of the cost benefit analysis in political



decision making, states that it actually reduces political influence and allows the numbers to speak although he admits this to be rather an immature claim. Goodstein (1999) further agrees that while the CBA was not immune to political agendas, it defined rules that characterised a good study, thereby limiting manipulation. Hansjurgens (2004) highlights the fact that cost-benefit analysis was aimed at contributing to rational thought in political decision making, thereby avoiding one-sided deliberation or consideration.

The CBA is also criticised for relying on the sensitivity analysis. Correia et al. (2007), mentions a number of limitations to sensitivity analysis such as the failure to take interrelationship between variables into account, failure to indicate the likely occurrence of each value, within the range of values, for each variable: and subjectivity, as it does not in itself result in a decision rule.

#### **2.8.4 Discount rate**

This is one of the important aspects to be considered when determining costs and benefits of a particular project or activity. The term is defined by Markandya, Perelet, & Mason (2002) as time preference (the time value of money) and declared it to be rationale behind discounting in CBA. Currie (2008), notes that a discount rate is used to ascribe a lower value over time to future benefits and costs, illustrating that a South African Rand (ZAR) today is may be worth more than that same Rand tomorrow. Hanley (1993) identifies two different methods of discounting: firstly, each value for each element of a project can be discounted and totalled; and secondly, the cost of each time period can be deducted from the net value benefits on an annual basis. Then, the annual benefits are discounted consistently through the lifetime of the project.

Due to varying views from academic literature and in practice regarding the discount rate that should be used in the financial analysis of investment projects three approaches were appointed out by (European Commission Directorate Regional Policy, 2008). These approaches include;

- the first one estimates the actual (weighted average) cost of capital. The benchmark for a public project may be the real return on Government bonds (the marginal direct cost of public funds), or the long-term real interest rate on



commercial loans (if the project is financed by private finance), or a weighted average of the two rates. This approach is very simple, but it may be misleading: the best alternative project could earn much more than the actual interest rate on public or private loans;

- the second approach establishes a maximum limit value for the discount rate as it considers the return lost from the best investment alternative. In other words, the alternative to the project income is not the buying back of public or private debt, but it is the return on an appropriate financial portfolio;
- the third approach is to determine a cut-off rate as a planning parameter. This implies using a simple rule-of thumb approach, i.e. a specific interest rate or a rate of return from a well-established issuer of securities in a widely traded currency, and then to apply a multiplier to this minimum benchmark.

This study adopted the third approach in selecting the discount rate

## **2.9 The value of value-addition activities**

The total economic value of value addition activities in Tshivhase Tea estates has yet to be determined. However, related studies have shown quantifiable consumptive use values for value addition. For example, De Silva and Herath (2011) show the significance of value-added activities by coming up with various strategies.

The principal objective of the activity valuation in organisations is to include technical and economical impacts in the process of cost-benefit analysis. The placing of a monetary value on the benefits and costs derived from such activities has already become a tool in justifying management expenditure decisions. Van Wilgen (1998) in Currie (2008) substantiates this by using an example in an ecosystem environment. Van Wilgen (1998) uses the Working for Water Programme as an example of how monetary valuation of an ecosystem service, formalised in a cost benefit analysis, was the major catalyst for the decision to launch such a project.

## Methodology

### 3.1 Introduction

This chapter features an exposition of the design of the study. It discusses information sources, sampling procedure and the methods used to determine the costs (construction of the processing plant) and benefits (high sales, revenue, and so forth.) as well as how costs and benefits are assessed using the cost benefit analysis. The issues of time horizon, discount rate and assumptions are also considered.

### 3.2 Study area

The study covers two tea estate which are Mukumbani and Tshivhase tea estates as shown in Figure 1 below. The two estates have merged to trade under Venteco Pty Ltd. The study area is situated entirely at Thulamela Local Municipality within Vhembe District Municipality, a former black homeland under the South African system of apartheid and now part of the Limpopo Province area. Tshivhase Tea Estates is situated at the northern part, and located about 11 km from Thohoyandou and approximately 81km from Makhado area. Tshivhase area has 74 villages and consequently 74 headmen (Fokwang, 2003). Mukumbani village in which the Mukumbani tea estates lies is found at the south west of the Tshivhase village. This is where most of the value-adding operations take place.

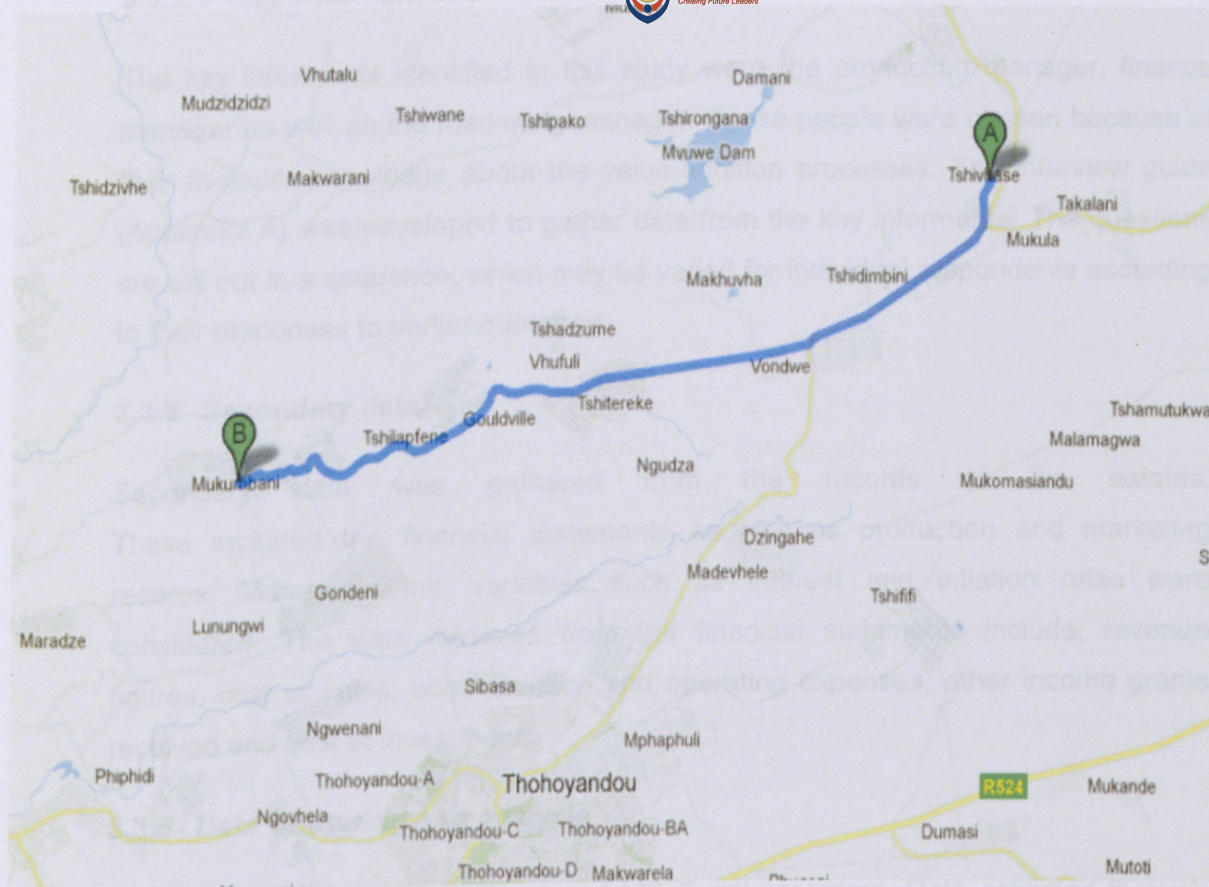


Figure 1: A map of Mukumbani/ Tshivhase tea estates (Adapted from Google Earth 2012)

### 3.3 Data collection methods

#### 3.3.1 Sampling techniques

The purposive sampling technique was used because the researcher would want to select people who are knowledgeable about the subject. Managers within specialised fields from both the tea estates were selected.

#### 3.3.2 Primary data

The primary data such as the challenges and strategies were sourced from the employees and staff of the tea estate. The specific methodologies utilised include key informant interviews using interview guide (Appendix A).

### 3.3.2.1 Key informant interview



The key informants identified in this study were the production manager, finance manager as well as the marketing manager. These people were chosen because of their in-depth knowledge about the value-addition processes. The interview guide (Appendix A) was developed to gather data from the key informants. The questions are set out in a sequence, which may be varied for individual respondents according to their responses to earlier questions.

### 3.3.3 Secondary data

Secondary data was gathered from the records of the estates. These included the financial statements as well as production and marketing records. Macroeconomic variables such as interest and inflation rates were considered. The data retrieved from the financial statements include, revenue figures, cost of sales, administration and operating expenses, other income grants received and cost of investment.

### 3.3.4 Data Capturing and analysis

Data was captured on MS Word and MS Excel programs. Data collected through questionnaires was sorted and analysed.

To show the costs and benefits for the value addition activity as a single value, the net present value (NPV) a cost benefit analysis method was used. The formula is expressed as follows:

$$NPV = \sum_{t=1}^n \frac{C_t}{(1+k)^t}$$

Where: NPV = net present value  
 $C_t$  = net cash flow at time  $t$

$I$  = cost of investment

$k$  = cost of capital

$t$  = time

(Correia, Flynn, & Uliana, 2007)pp. 270

According to Correia *et al.* (2007), this value method determines the NPV of the expected future net cash flow estimates, which is, in turn, discounted at a required rate of return, usually the cost of capital. In this study a 10% discount rate was utilised.

With respect to value addition activity in Tshivhase/ Mukumbani tea estates, to determine its NPV the cash flow must first be determined by deducting the cash outflow from the cash inflow to get a net cash flow. The net cash flow is discounted, which Correia *et al.* (2007) refer to as the opposite of compounding, over a determined time frame to ascertain the NPV.

#### 3.3.4.1 Benefits

The economic benefits fall into two categories, that is, monetary and non-monetary. The monetary benefits include generation of tax revenue, the foreign exchange saving and earning effect to the estate and country at large by substituting the current imports and exporting the product. There are several non-monetary benefits that accrue to firms. In many cases these translate into indirect monetary benefits. However, since they cannot be precisely measured they must be called non-monetary and these include but is not limited to increased customer satisfaction, increased employee satisfaction, improvement in the reputation of the firm and employment opportunities to be created by the introduction of value addition activity (Management study guide, 2008).

#### 3.3.4.2 Ranking decision

To determine their ranking, projects need to be classified. Projects may be classified into replacement or expansion decisions and further classified as independent or mutually exclusive (Currie, 2008). Some capital budgeting techniques are used to

accept and/ or rank projects (Correia  2007). Two value methods which are used are the NPV and the Internal Rate of Return (IRR).

The IRR method is the discount rate at which a zero NPV is obtained and compared to the cost of capital (Correia *et al.*, 2007). The NPV and the IRR-value methods allow for comparison of projects using the same units (NPV and IRR value), thereby comparing identical entities. This thesis will employ the NPV. The findings will be confirmed using the IRR value method. The calculated IRR, NPV and the discount will be based on the cash flow statement.

The reason for using this method is because; the NPV method discounts future cash flows to a base year and deducts the cost of the investment, expressing a net present value. It is considered beneficial to accept the project if the NPV is positive and reject the project if the NPV is negative. Furthermore, multiple projects can be ranked according to the NPVs.

#### **3.3.4.3 Sensitivity Analysis**

This was carried out in order to see how the recommendations of the CBA are and to test the strength of the NPV when input- the costs and benefits – on which it is based change. In this case, a sensitivity analysis of the NPV to a change in discount rate was shown by performing the analysis using different rates. For the purpose of the sensitivity analysis three situations were considered that benefits reduced by 20%, costs inflated by 20% and lastly the combined effects where both benefits are reduced and costs inflated by 20%.

#### **3.3.4.4 Time horizon**

Time horizon is one of the important aspects to be considered when calculating values, because calculating values over an unlimited time horizon often results in ambiguity (Currie, 2008). In this study, the cost and benefit of the value-addition activity was from 2005 to 2012.

### 3.3.4.5 Profitability

The projected income statement determines as to when the activity or project starts generating profit. Important ratios such as profit to total sales, net profit to equity (return on equity) and net profit plus interest on total investment (return on total investment) to determine the behaviour of the trend during the lifetime of the project were all be considered. The income statement and the other indicators of profitability show as to whether the project or activity is viable. To ascertain the profitability of the activity, the profitability index (PI) was used. It is expressed as follows:

$$PI = 1 + \frac{NPV}{\text{Initial investment}} \quad (\text{Linn, 2011})$$

### 3.4 Ethical consideration

Ethics are guidelines to individuals on how they should conduct themselves in a given situation. In carrying out the research study the research ethics issues which were considered are as follows;

- Voluntary participation: the researcher gave the participants consent forms prior to engaging them in the study. The participants were advised that they are not obligated to participate and that they can pull out if they feel so.
- Anonymity and confidentiality: the research was conducted in a manner that did not associate the participant to the responses. The participants were informed that they can choose not to respond to questions if they feel that it erodes their anonymity.
- Deceiving subjects: the respondents were informed that the information which they gave was going to be used for the purpose of the study only and not for any other purpose. Accompanying documents were produced to verify the purpose of the study and how the findings were to be used.
- No harm to the participant: the researcher made sure that the questions asked in the study do not cause any form of emotional, psychological or physical harm. Information that has the potential to embarrass the participants was avoided.

Table 3.1: Summary of methodology

4.1 Introduction

| Objectives  | Data required   | Data collection instrument | Analysis tool           | Reason for using this model   |
|---|---|----------------------------|-------------------------|---|
| To evaluate whether the benefits of value addition outweigh its costs and by how much         | Costs incurred and benefits accrued   | Guideline interview        | Net Present Value (NPV) | Determining the costs and benefits  |
| To determine whether value addition is a sound investment/ decision                           | Expenditures and the benefits   | Guideline interview        | Net Present Value (NPV) | Relationship between Costs and benefits   |
| To determine challenges faced by the tea estate in adopting the value addition process        | Challenges faced by the tea estate in adopting the value addition activity.       | Guideline interview        |                         | Identifying the challenges being faced by the tea estate  |
| To come up with strategies that will improve or increase the returns of value addition on tea | Various activities surrounding the value addition such as branding, packaging etc | Guideline interview        |                         | To assess each and every activity within the value addition which include branding, packaging etc |

operational but the tea estate could not meet its costs due to high minimum wages and lack of proper market for the value added tea. This was in coherence to what the findings and what the brand manager narrated in the key informant interview process.

## Results and Discussion

Table 4.1: Distribution of cost and benefits for the period 2005-2012

### 4.1 Introduction

This chapter discusses the findings of the study zooming on each and every specific objective underpinned in the study

### 4.2 Comparison of the costs and benefits of the value added initiative.

From Table 4.1 below, it can be concluded that the value addition activity is not viable. The estate accrued total benefits of R 78591670 against a total cost of R196 053 239 for the period 2005-2012 under review. The costs are outweighing its benefits. There is a high margin of R117 461 569. This indicates that the tea estate is spending more than it can generate from the sales of the value added tea. Between 2005 and 2007 the initiative was still at its initial stage and was not fully operationalized. The data for 2006 is not available due to the fact that no production took place. During that same year tea was allowed to recover from the shock it had received from the previous years when the tea bushes were abandoned by the previous owners as evidenced in Figure 2 (Page 35). In the 2008-2010 period the initiative was fully adopted but production of tea was fully hampered by the intermittent strikes by its workforce. This resulted in the tea estate incurring more costs due to production stoppages and some of tea was spoiled in the value addition process. This is in consistent to what the general manager of the tea estates in the key informant interview. In the period 2011 and 2012, the value addition was fully operational but the tea estate could not meet its costs due to high minimum wages and lack of proper market for the value added tea. This was in coherence to what the records and what the financial manager narrated in the key informant interview process.

Table 4.1: Distribution of cost and benefits for the period 2005-2012

| YEAR | TCOST      | REVENUE<br>(Benefits) | DISCOUNT<br>FACTOR 10%" | PVALUE OF<br>COST (Rands) | PVALUE OF<br>BENEFITS (Rands) |
|------|------------|-----------------------|-------------------------|---------------------------|-------------------------------|
| 2005 | 3 416 481  | 46900                 | 0.9091                  | 3 105 922.88              | 42 636.79                     |
| 2006 | 0          | 0                     | 0                       | 0                         | 0                             |
| 2007 | 8 275 029  | 100 038               | 0.7513                  | 6 217 029.29              | 75 158.55                     |
| 2008 | 29 764 438 | 382 293               | 0.6830                  | 20 329 111.15             | 261 106.12                    |
| 2009 | 36 856 647 | 18 946 979            | 0.6209                  | 22 884 292.12             | 11 764 179.26                 |
| 2010 | 22 777 283 | 20 053 808            | 0.5645                  | 12 857 776.25             | 11 320 374.62                 |
| 2011 | 46 401 574 | 19 145 523            | 0.5132                  | 23 813 287.78             | 9 825 482.40                  |
| 2012 | 48 561 787 | 19 916 129            | 0.4665                  | 22 654 073.64             | 9 290 874.18                  |
|      |            |                       | TOTAL                   | 111 861 493.10            | 42 579 811.92                 |
|      |            |                       | NPV                     | -69 281 681.19            |                               |
|      |            |                       | BCR                     | 0.380647627               |                               |

Source: Computed from the field study (2013)

Most of the costs which are incurred by the estate are mostly from the labour since tea is considered to be labour intensive. This was supported by managers from both tea estates in the key informant interview that about 60% of the total costs are from labour (Personal communication, Tshivhase tea estates, November 2012). With regard to high costs, the government through its intervention also fuelled the cost in the period 2005-2012. From Table 4.1 above, it can be seen that in all the years under consideration the costs are offsetting the benefits in the tea estates. For example in 2008 the costs were ZAR 29 764 438 compared to the benefits of ZAR382 293 giving a margin of ZAR 29 382 145 which indicates the loss the estate made. Some of the cited reasons by the tea estate management include high competition from other tea producing companies, poor sales resulting from extra tea being disposed off, and irregular strikes by its employees resulting to abandonment of tea bushes for longer periods. To maintain the biomass of the tea after it has been abandoned proves to be costly as there will be no revenue generated. The costs

also are also as a result of intermittent production of tea due to precarious conditions at the tea estate.

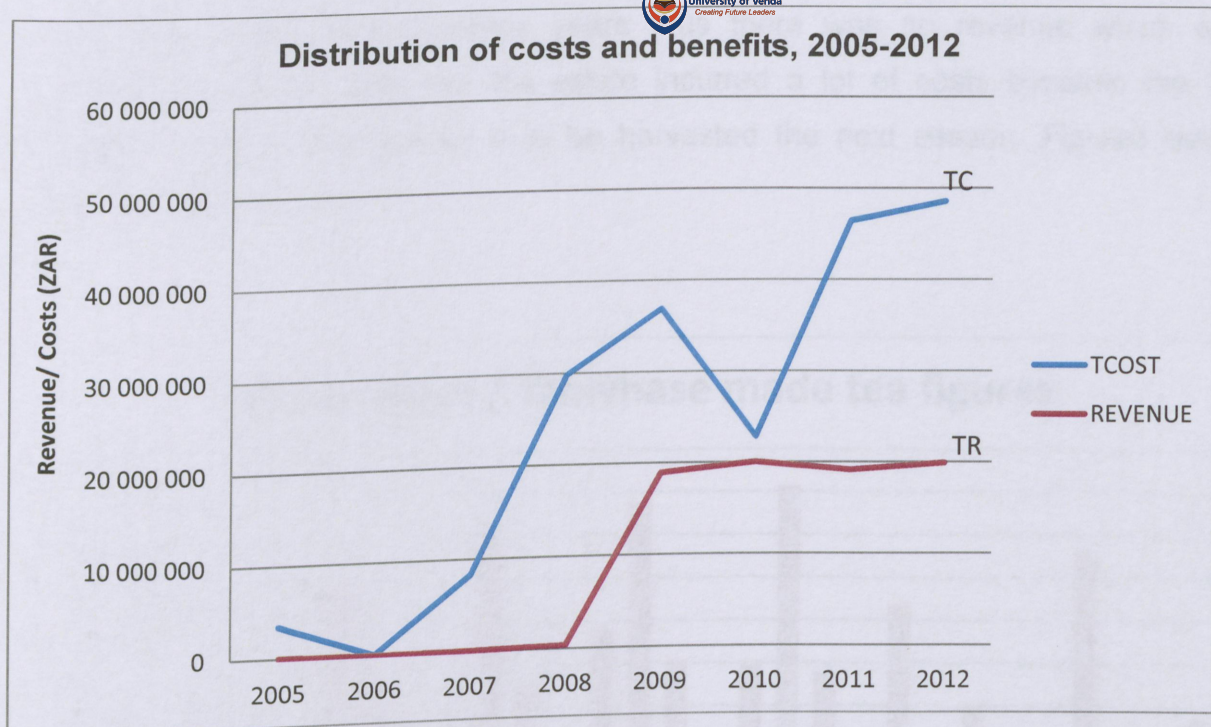


Source: Field study survey 2013

Figure 2: Distribution of Benefits and costs, 2005-2012

Production of tea in Mukumbani/ Tahivhase tea estates resumed in 2005 after it had been abandoned by its previous owners. In 2006 there was no production of tea since tea was maintained, pruned and left to grow out. Tea was harvested and processed in early 2007 towards 2008 followed by a sharp increase in sales as indicated by the revenue curve in Figure 2 above. The sales of tea started to rise in 2008 to 2009 but the costs were still offsetting the benefits. From figure 2 above, it can clearly be seen that the cost was counterweighing what the tea estate could generate. There was a sharp margin between the 2010-12 periods. This was because the tea estate has closed down its operation due to strikes by its employees, leading to a high cost for maintaining the tea bushes. Once the tea has been abandoned, it takes approximately 102-103 days to harvest after pruning (Personal communication, Tahivhase tea estates, May 2013). This means that there will be an outflow than an inflow as no income will be generated during this period.

In the year 2006, pruning was done between August and September and tea did not do well due to fact that it was a dry year (see figure 3 below). The situation was further exacerbated by the abandonment of the tea bushes for two years, that is, 2007/08. In the same period tea was left to fully recover from pruning and also from



Source: Field study survey 2013

Figure 2: Distribution of Benefits and costs, 2005-2012

Production of tea in Mukumbani/ Tshivhase tea estates resumed in 2005 after it had been abandoned by its previous owners. In 2006 there was no production of tea since tea was maintained, pruned and left to grow out. Tea was harvested and processed in early 2007 towards 2008 followed by a sharp increase in sales as indicated by the revenue curve in Figure 2 above. The sales of tea started to rise in 2008 to 2009 but the costs were still offsetting the benefits. From figure 2 above, it can clearly be seen that the cost was counterweighing what the tea estate could generate. There was a sharp margin between the 2010-12 periods. This was because the tea estate has closed down its operation due to strikes by its employees, leading to a high cost for maintaining the tea bushes. Once the tea has been abandoned, it takes approximately 102-103 days to harvest after pruning (Personal communication, Tshivhase tea estates, May 2013). This means that there will be an outflow than an inflow as no income will be generated during this period.

In the year 2006, pruning was done between August and September and tea did not do well due to fact that it was a dry year (see figure 3 below). The situation was further exacerbated by the abandonment of the tea bushes for two years, that is, 2007/08. In the same period tea was left to fully recover from pruning and also from

the shock it had from previous years thus there was no revenue which was generated. On the other the tea estate incurred a lot of costs because the tea needed to be maintained for it to be harvested the next season. Figure3 below illustrate the scenario.

Table 4.2: Calculation of net present value (NPV) in ZAR

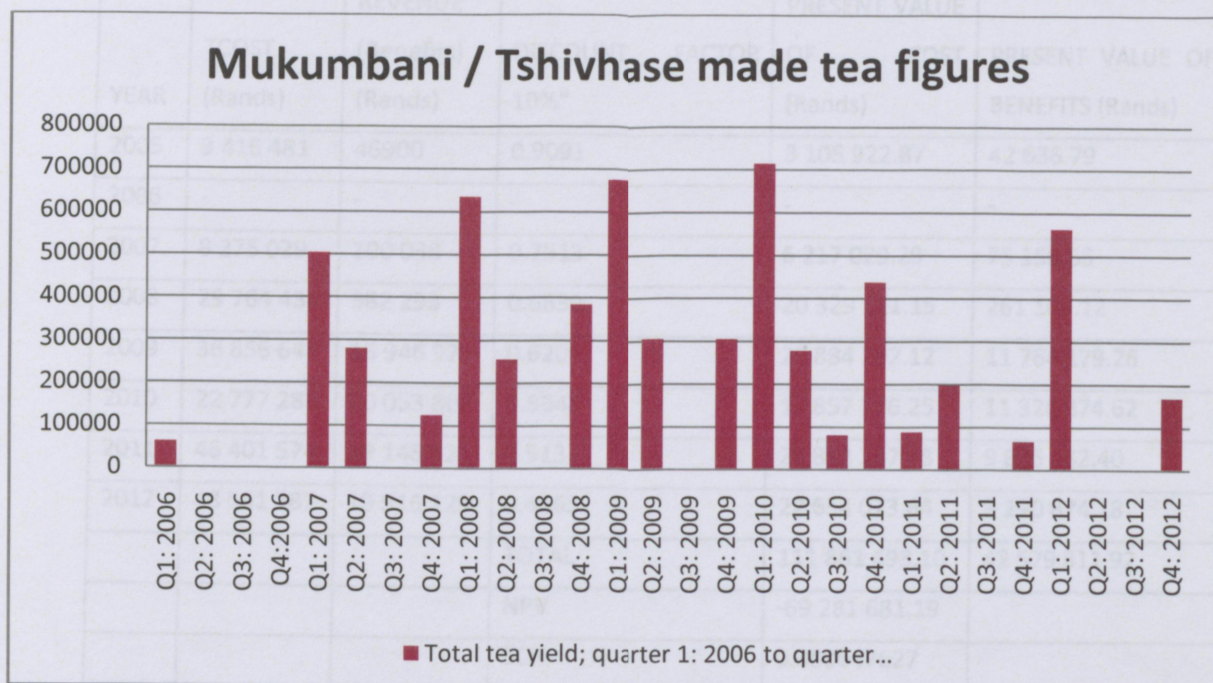


Figure 3: Made tea quarterly figures from 2006-2012 (Source: Field Survey 2013)

From Figure 3 above during the first quarter of 2006 about 60 tonnes of tea was produced followed by no production in the subsequent quarters in the same year. The production of tea was coupled by sharp increase in the first quarter of the year 2007 that is 500 tonnes. There was an increase trend in the successive years. The third quarter in all the years falls in winter and there will no production since that is where the tea is maintained and dormant. The production of tea fell in the whole of 2011 this was due to strikes by its workforce. This further worsened the situation of the tea estate. The costs were forever high because of high input costs and high minimum wages by the government. The initiative was launched by the government and it had promised to support the activities through grants, although the government is providing the grants, this is not enough because the tea estate cannot generate more than it is incurring. Currently the tea estate is not fully engaged in

producing value added tea. This is because of the shrinkage for market for their value added tea. There is need for product awareness, because the organisations seem not to have enough market for its value added tea. Much of the tea estate sales are from the bulk tea. Value added tea is produced at a limited scale even though it fetches good price.

Table 4.2: Calculation of net present value (NPV) in ZAR

| YEAR | TCOST<br>(Rands) | REVENUE<br>(Benefits)<br>(Rands) | DISCOUNT<br>FACTOR<br>10%" | PRESENT VALUE<br>OF<br>COST<br>(Rands) | PRESENT VALUE OF<br>BENEFITS (Rands) |
|------|------------------|----------------------------------|----------------------------|--|--------------------------------------|
| 2005 | 3 416 481        | 46900                            | 0.9091                     | 3 105 922.87                           | 42 636.79                            |
| 2006 | -                | -                                | -                          | -                                      | -                                    |
| 2007 | 8 275 029        | 100 038                          | 0.7513                     | 6 217 029.29                           | 75 158.55                            |
| 2008 | 29 764 438       | 382 293                          | 0.6830                     | 20 329 111.15                          | 261 106.12                           |
| 2009 | 36 856 647       | 18 946 979                       | 0.6209                     | 22 884 292.12                          | 11 764 179.26                        |
| 2010 | 22 777 283       | 20 053 808                       | 0.5645                     | 12 857 776.25                          | 11 320 374.62                        |
| 2011 | 46 401 574       | 19 145 523                       | 0.5132                     | 23 813 287.78                          | 9 825 482.40                         |
| 2012 | 48 561 787       | 19 916 129                       | 0.4665                     | 22 654 073.64                          | 9 290 874.18                         |
|      |                  |                                  | TOTAL                      | 111 861 493.10                         | 42 579 811.92                        |
|      |                  |                                  | NPV                        | -69 281 681.19                         |                                      |
|      |                  |                                  | BCR                        | 0.380647627                            |                                      |

Computed from data (2012)

The findings from the economic analysis in Table 4.2 revealed that the tea estates should consider revising their strategies and expenditure pattern if they want to ensure growth, expansion and invest in value addition initiative since the net present value (NPV) is negative and the Benefit Cost Ratio (BCR) is less than zero i.e. -ZAR 69 281 681.19 and 0.380647627 respectively. This gives an indication that the project does not provide enough financial benefits to justify the investment. This was attested with what the financial manager reviewed in a key informant interview that the project is costly to the tea estate because it could not generate what it is expected since its inception. According to The Standard Bank of South Africa Limited, (2013) a negative NPV implies that the project or the initiative does not pay because the internal rate of return is lower than the required rate of return. In

addition Gittinger, (1982) also indicated that a lower NPV index and a lower ratio of benefits to costs shows that investing on a project or initiative is not financially beneficial and economically viable. However, judging by the number of employees (an average of 2500) absorbed by the enterprise, there was some social benefits to the community in terms of job creation. The cost associated to maintaining 2500 employees without jobs and the social ills that could be committed would be higher than the cost of running the project.

### 4.3 Sensitivity analysis

This is carried out in order to see how the recommendations of the CBA are and to test the strength of the NPV when input- the costs and benefits – on which it is based change. In this case, a sensitivity analysis of the NPV to a change in discount rate was shown by performing the analysis using different rates. Mosoma et al., (2012) indicated that the purpose of the sensitivity test is to determine the effects of the marginal changes in certain variables would have on the project. They further argued that it is necessary to run the sensitivity analysis of such initiatives or projects to determine the effects of uncertainties. From the study conducted, it can be concluded that the variables that were most likely to change were the price of value added tea, labour costs, maintenance costs and the market position. For the purpose of the sensitivity analysis three situations were considered that benefits reduced by 20%, costs inflated by 20% and lastly the combined effects where both benefits are reduced and costs inflated by 20%

*Ceteris paribus*, the initiative would be highly sensitive to the reduction of benefits resulting from the changes in labour and input costs especially as production of value added tea increases. From Table 4.3 below (P.39), a reduction of benefits by 20% causes the NPV to fall from -69281681.19 to -103345530.7 and the BCR from 0.380647627 to 0.076129525. It can therefore be concluded that the initiative or project is highly sensitive to changes in input and labour cost.

Similarly, as can be seen from Table 4.3 a 20% increase in costs result in an increase of the NPV from -69281681.19 to 20207513.3 and BCR from 0.380647627 to 1.903238136. This clearly indicates that the project is more sensitive to the increase in costs than to a reduction in benefits.

The combined effects which include a reduction of benefits by 20% and an increase of costs by 20% produce the following results. As seen from Table 4.3 the effects of the two combined will result in an increase of NPV to -13856336.24 and leaving the Benefit Cost Ratio of 0.380647627 unchanged. This clearly suggests that the project still is economically and financially viable as indicated by the negative NPV and BCR less than one.

Table 4.3: Summary of discounted cash flow analysis of the value addition initiative

| MEASURE                         | NORMAL CONDITIONS | BENEFIT REDUCED 20% | COST INFLATED 20% | COMBINED       |
|---------------------------------|-------------------|---------------------|-------------------|----------------|
| Present value of costs (PVC)    | 111 861 493.10    | 111 861 493.10      | 22 372 298.62     | 22 372 298.62  |
| Present value of benefits (PVB) | 42 579 811.92     | 8 515 962.38        | 42 579 811.92     | 8 515 962.38   |
| Net Present Value (NPV)         | -69 281 681.19    | -103 345 530.70     | 20 207 513.30     | -13 856 336.24 |
| Benefit Cost ratio (BCR)        | 0.380647627       | 0.076129525         | 1.903238136       | 0.380647627    |

Computed from data (2012)

#### 4.4 Challenges faced by the tea estate in adapting the value addition processes

According to the tea estate officials (i.e. managers from both the tea estates and the financial manager) the tea estate faced a cosmic of challenges ever since the value addition was adopted. Some of the identified challenges were lack of markets, high cost of production, too much control and high minimum wages by the government, intermittent strikes by its workforce, stiff competition from other tea producing companies and among others.

##### 4.4.1 Lack of markets

Market for value added tea is a major setback to the success of the project. This was in line with what the tea estate manager revealed in a key informant interview. According to the Tshivhase tea estate manager, the tea estate is producing value added tea at a limited scale due to insufficient market for its products. Most of the sales are from bulk tea. The prices of bulk tea are low as compared to value added tea i.e. R23/kg compared to R55/kg respectively. Selling value added tea and Rooibos tea will increase the revenue by approximately 62% and 72% respectively.



The value added department cited that due to the insufficient market of value added tea, most of its tea will reach its expiry date whilst in the storerooms. Although tea shelf life is 5 years, they give it two years. The tea that has expired or passed its best before date was referred to as “old stock” and it is discarded or burnt. This clearly indicates a complete loss because the cost incurred in producing that stock could not be recouped in any way possible.

Although a thorough marketing research has been conducted no proof of sales was established, it was difficult for the tea estate to get the new products listed with retailers (Personal communication, Tshivhase tea estates, 23 April 2013). The organisation has to work hard and market their products more aggressively in order to get a share of the limited disposable income available as a result of these harsh staggering conditions at the tea estates.

#### **4.4.2 Too much control by the government.**

The project is still under the hands of the government. The government fully funded the project and in that regard, the tea estate management cannot do anything unless it is approved by the government. The government needs to give the tea estate the opportunity to explore other avenues with minimum intervention.

#### **4.4.3 Stiff competition**

The South African Tea industry is highly competitive with strong players who invest significantly in creating awareness and build brand equity in order to sustain market share and category consumption. Studies reveal that there is positive correlation between awareness and usage i.e. the usage is proportionate to the level of awareness. Tshivhase/ Mukumbani tea estates lacked this aspect as a result they failed to secure a considerable market share. The more aware the consumer is of brand, the more likely they are to use that specific product. The competitors of the products differ depending on the type of the product. The main competitors of Black tea range include Joko, Glen, Trinco, Lipton, Five Roses and No Name Brands. Moreso, the main competitors of Rooibos tea include Eleven O'clock, Freshpak, Lipton, Laager, Five Roses and No Name Brands.

There has been major rivalry by competitors for example when Tshivhase tea launched Midi tea in the market, Five Roses countered by launching African Blend Black Tea. This further worsened the staggering market share of Midi Tea because these brands often launch cheaper formats and that they have existing brand equity, capacity and category expertise. Furthermore, these existing black tea brands and Rooibos competitors are strong brands that have been in the market for a very long time. They have strong brand familiarity, heritage, and trust amongst South African consumers.

#### **4.4.4 High input costs**

Ever since the value addition project was launched, the estate was experiencing high production costs. This is one of the major challenges that the tea estate is facing. The larger proportion of the costs is emanating from labour costs. From the tea estate records, labour costs constitute 60% of the total costs. South Africa compared to other tea producing countries has high minimum wages. According to the tea estate general manager, the ratio of producing green leaf compared to other countries is 1:7, that is, it costs ZAR 2.63 to produce a kilogram of green leaf in South Africa as compared to ZAR 0.38 per kilogram of green leaf in other countries. To produce tea in South Africa the minimum wage per employee is approximately ZAR 105 per day as compared to ZAR 15 per day in countries like India, Sri Lanka, China, South Korea, Japan, Burundi, Congo, Zimbabwe, Tanzania, Malawi and Kenya. This has made Tshivhase/ Mukumbani tea estate to lose its competitive advantage to both local and international markets. In the case of local markets most of its competitor import cheap tea from these tea producing countries and sell the tea at relative low price. On the other hand Tshivhase/Mukumbani tea estates produce tea at a high cost of production and its tea will become expensive at both local and overseas markets.

#### **4.5 Strategies on improving or increasing the returns of value addition on tea**

The firm is the most vital and basic unit in the business environment. Tshivhase /Mukumbani tea estates strategies are affected by both internal and external factors. Austin, (1990), indicated that a firm's strategies and operations are affected by the structure and the dynamics of the industrial environment, the strategies and policies

of the national environment and most transactions, bilateral linkages, multilateral mechanisms and global industries of the international environment. Thus, a firm cannot be isolated from its business environment. Its behavioural responses are partly determined by the business environment and partly by the nature of the firm. Likewise, the strategies of the Mukumbani/Tshivhase tea estates, their operations and performance are influenced by the local as well as the global tea industry. The questions such as whether they have utilised factors of production efficiently and effectively, produce the best combination of outputs and contribute to the economy within their ability are important problems for overall growth. Friedman, (1984) pointed out that such diversity of firm behaviour is expected to be an important determinant of the direction and speed of development of the industrial sectors and the economy at large.

The performance of Mukumbani/Tshivhase tea estate is the final outcome that results from a number of internal activities. It is an indicator of the technical and allocative efficiency of a firm. The tea estate should focus on improving the market position, market share and intensify its market research. The profitability or performance of a firm is largely influenced by the structure of the market (Bain, 1959). Therefore the firm has to engage into research about a particular market before launching or making decisions on what to produce. Porter, (1980), argued that the fundamental determinant of firm performance is industry attractiveness. There are five competitive forces which were considered by Porter, to determine the profitability of a firm and these include bargain power of suppliers, bargaining power of buyers, entry of new competitors, threat of substitutes and rivalry among existing competitors. Tshivhase/Mukumbani tea estates need to create a very good image to its surrounding and prove to the locals that it is capable of producing high quality tea. This will attract customers as well as building customer loyalty. Furthermore, Grant (1991) pointed out that a firm's ability to earn a rate of profit in excess of its cost of capital depends upon two factors namely the attractiveness of the industry in which it is located and its establishment of competitive advantage over its rivals.

Value added strategies merely depend on the company's competencies and other areas of expertise as an organization as a whole. Tshivhase/Mukumbani tea estate should engage in skills and development programmes so as to equip its workforce

and ensure that the whole work fits in with the overall goal of the tea estate. The purpose is to provide high value to its customer's base than to add value to the individual products and services it sells. Quality should begin with the employees. It is tea estate organisational value rather than its product that is at the core of value added strategies. Egerstrom (1996), states that..." the individual farm is being transformed into a small manufacturing firm that makes component parts for an extremely sophisticated and integrated global food.

Tshivhase/Mukumbani estate value added projects should start with intelligent market information on customers and competitors to make sure an opportunity exists. The formula for victory is to start with a basic commodity and augment a vigorous creativity to produce a product needed by consumers that also has a prized advantage on the competitors. This is very critical considering the competition in the tea industry which is coupled by giant firms with a well-established customer base and expertise. Successful groups enlist the counsel and involvement of many experts and stakeholders, study conditions and trends, develop a vision, chart the future and develop strategic and operational plans with which producers can identify.

There are ten steps which were suggested by O'Neill, (1997) on how to establish a successful value- added business;

- i. Start by choosing something you love to do
- ii. Establish good relations with customers to identify products that will appeal to them
- iii. Maintain consistent supply of high quality products
- iv. Make sure that the products will be of high demand over the long term
- v. Partner with people possessing good technical expertise
- vi. Carefully hire consultants with expertise
- vii. Hire an experienced project manager
- viii. Have a complete plan prior to start
- ix. Make long-range plans
- x. Plan on more time, effort, and expense than expected

In addition to the O'Neill steps, Coltrain et al., (2000) identified four different methods that can be used to add value to producer's raw commodities. These methods

include selling into open markets normal distribution channels of marketing and processing, investing in a portfolio of food and beverage companies, using production or marketing contracts and forming producer- owned business.

#### **4.5.1 Open market distribution and processing channels**

Tshivhase/ Mukumbani tea estate should consider selling its tea through shorter channels as channels also influence the success of a product in the market. Long distribution channels will result in spoilage of commodities and also loss of revenue. Beverage marketing channels encompasses all the players and processes by which food and beverages are distributed from the producer to the consumer (Coltrain et al..., 2000). For example tea has relatively shorter channels compared to non-perishable which has a longer shelf life. The middlemen has since been playing the role of breaking bulk ,that is, buying in large quantities from farmers and producers and sell them into smaller units to consumers who need to buy small quantities of many items. The tea estate should take advantage of the growing size of most retailers. With the growing in size of retail chains most of the producers prefer to negotiate and distribute directly to these large retail outlets (Conner et al., 1997). Furthermore, the Tshivhase/Mukumbani tea estate should focus more on matching customer taste and preferences with its products. In the past two decade, food and beverage processors have provided, innovative, easy- to- prepare food and beverages with convenient packaging, because consumers are in need of quality, variety nutrition and food and beverage safety. In addition, satisfying consumer needs will facilitate closer coordination and communication between agricultural producers and food and beverage processors (Coltrain et al..., 2000). Durham et al..., (1997) reilleterated that succesful processors in the future will add value through greater convenience, nutrritional qualities, and or fresher taste.

#### **4.5.2 Direct marketing**

Direct maketing channel in another techniqe that Tshivhase/Mukumbani tea estates can pursue to value add their products. Direct marketing channels embraces individual producer processing businesses, roadside stands, farmer's markets and community supported agriculture. It is imperative that the tea estate should consider establishing a community supported agriculture. Community supported agriculture

involves a partnership agreement between growers and consumers to provide its products throughout the season, while sharing both the risks and rewards involved in production agriculture (Coltrain et al., 2000). Accordingly, the tea estate must know the potential customer base, their income level, household size, age ethnic group and education level to estimate the demand for direct marketing.

#### **4.5.3 Conventional Marketing**

Tshivhase/Mukumbani tea estate should consider selling its tea to the broker or agent who can identify the market thereby taking the risk associated with the changes in the market. The conventional method of marketing is generally to deliver finished products to packers and processors. Traditionally, value added activities happen in the final stages of the agricultural commodity-marketing channel. However, opportunities exist in the early stages of the chain (Coltrain et al., 2000). Value added agriculture takes research, innovation, and drive. In reality when the value added venture becomes operational, players are transformed from commodity producers into processors and marketers of a finished, value added, food and beverage product.

#### **4.5.4 Niche Marketing**

Since the Tshivhase/ Mukumbani tea estate is failing to secure a market share in the industry it should identify those niches which are not yet served or targeted by the giant companies. The tighter a niche can be identified, the easier it becomes to identify and understand the needs of customers within the niche. At the same time it helps the tea estate to have a clear picture of whom they are marketing to and reduce concerns about wavering or being unsure of what their goals and objectives are. Niche marketing is a successful part of creating a need for value-added products. The tea estate should not rely on speculation or guess work when filling a market niche, instead must bank on market planning. Chang, (1995) identified niche marketing as a viable strategy for small business exporters in achieving a competitive edge. According to Coltrain et al., (2000), products must be well developed when targeting a specific group of customers and focusing markets to smaller targets. Niche marketing allows a firm to define who they are marketing to, thus giving power to the tea estate. Kotler and Armstrong, (1995) indicated that firms

can build skills and customer goods to defend themselves against any competitor reactions. It is undoubtedly that if Tshivhase/Mukumbani tea estates can demonstrate a sincere and deep understanding of the needs of a tightly defined niche of customers by developing a more accurate solution to meet these needs will quickly establish a reputation that will be hard to compete against. Niche market can achieve a higher market share and larger profits because of the following advantages; Market penetration is achieved without the massive expenses needed when dominating the market without attacking established brands; high market share can be obtained against competitive products and lastly the product is positioned so that exclusive identification of that product is identified.

Coltrain et al., (2000) identified characteristics of a niche programme that is; new uses or demands for existing products are discovered, new products for current or still unknown markets for consumer desires are developed and current product lines are expanded to create more consumer use.

Niche marketing can be established in two ways. Firstly, is analysing the impact of trend or need among current and prospective users and then determining if the trend might create an opportunity for a new product or if a current product can be promoted in a new way. Secondly, by continually monitoring product users to find out ways to subdivide them into niches. These divided groups can provide a market in which an existing or new product can be promoted (Watts, 1995).

### 3.2.2 Challenges faced by the tea estate in adopting the value addition initiative

The tea estate is faced with a multitude of problems. The major problems cited by the participants in the key informant interviews include, high minimum wages by the government, lack of markets for its products and competition from other giant tea producers, high cost of production and intermittent strikes by its workforce.

## Summary, Discussions and Conclusions

### 5.1 Introduction

This chapter comprises of the summary and conclusions. It summarises and discusses the results of the study with reference to the objectives and hypothesis presented in the first chapter of the study. The second part relates the limitations of the study. This is followed by a consideration of the broader implications of the research results for policy development and practice. Finally the chapter ends with a list of suggestions for future research.

### 5.2 Summary and Discussions

#### 5.2.1 Economic analysis of the value addition initiative

The project could not generate more than the costs it could incur. From the study it can be seen that the costs are offsetting the benefits thus the initiative is not viable. The costs are offsetting the benefits by ZAR69281681.19. The project does not even break-even, it is relying from the grant or funding from the government. The project is able to survive because of the grant from the government. This simply means that without the government support the project cannot stand alone it will fall. From the study the initiative is not a sound investment decision unless or otherwise the tea estate can be able to cover for at least 50% of its cost without the funding from the government. Thus, the hypothesis that benefits of value addition outweigh its cost and value addition is a sound investment tool is not true, therefore the null hypothesis is rejected.

#### 5.2.2 Challenges faced by the tea estate in adopting the value addition initiative.

The tea estate is faced with a multitude of problems. The major problems cited by the participants in the key informant interview include, high minimum wages by the government, lack of markets for its products, stiff competition from other giant tea producers, high cost of production and intermittent strikes by its workforce

demanding wage increase. According to the tea estate manager, in South Africa the minimum wages are very high as compared to other countries, for example the plucking rate in Zimbabwe is USD0.4 dollars per kg. Assuming that each employee pluck 36kg per day, in ZAR terms Zimbabwe incurs R14.40 per day as compared to R105 rands per day in South Africa. This simply means South Africa's labour costs is compared to Zimbabwe is 1:7. Thus, South Africa does not have the competitive edge over Zimbabwe. Lack of market is also considered as a major setback as far as value added tea is concerned. The tea estate could not find a proper market. Initially their target market was the government institutions, but the response from these institutions is very poor. The belief was that these institutions were going to consume more than 80% of its tea. Unfortunately, there was a problem of mixed interests within these institutions thus distorting the market for Tshivase/ Mukumani tea estate.

The tea estate faces a major blow from its giant competitors. These competitors try by all means to retain the market and if there is any intruder they close the gaps by whichever way possible. Tshivase/ Mukumabani tea is still struggling to secure only 1% of the market share. This has been made difficult by giant companies like, Five roses, Joko, Trinco, Freshpak. These existing black tea brands and Rooibos competitors are strong brands that have been in the market for a very long time, strong brand familiarity, heritage, and trust amongst South African consumers.

Looking at the current status and conditions of the tea, the hypothesis that the tea estate faced challenges in adopting the value addition initiative is true thus, we accept the null hypothesis.

### **5.2.3 Strategies for improving or increasing the returns of value addition on tea**

The study came up with strategies that will improve or increase returns of value addition on the tea estate. These strategies include but not limited to niche marketing, open access market distribution and processing channels, direct marketing and conventional marketing. Niche marketing is a successful part of creating a need for value added products. This requires the tea estate to identify a niche which allows it to achieve a competitive edge. A niche marketing strategy is

one of the best strategy that can be used to increase the returns of value addition. Market penetration is achieved with the less expenses in dominating the tea market without attacking established because that is where the problem begins. Once they attack the established brands penetration into the market is difficult since these giant companies they try by all means to close the doors for the entrance of new players and they do normally succeed in doing so because of high capital base, customer loyalty etc.

The tea estate can also employ a direct marketing strategy whereby it will also be accomodating walk in customers i.e from communities surrounding the tea estates. It can do so by opening up roadside stands where it can sell its various range of tea products.

Open market distribution and processing channels are said to yield better results as far as value addition is concerned because it facitates coordination and communication between the tea estates and its customers. This is especially vital when dealing directly with large outlets such as Pick n Pay because the tea estate will get to understand the taste and preferences of its customers.

### **5.3 Conclusions**

The study concluded the following;

#### **5.3.1 Economic analysis of the value addition on tea**

From the results it can be concluded that the project or iniative is not viable. This is explained by a negative NPV and BCR of less than one i.e ZAR-69281681.19 and 0.380647627 respectively. This further informs that the value addition initiative is not a sound investment decision.

#### **5.3.2 Challenges faced by the tea estate in adopting the value addition initiative.**

The initiative or project did not succeed due to a number of challenges which include lack of markets for its value added tea products, high minimum wages by the governement, high cost of production, intermittent strikes by its workforce. Despite all these challenges the tea estate manage to survive from the government. This calls



for a need of the government to implement policies as far as the tea estates are concerned.

### **5.3.3 Strategies for improving or increasing the returns of value addition on tea**

From the study it can be concluded that in order for the tea to survive and make the value addition successful or viable; the tea must explore new strategies. The study presents a number of strategies that can help in improving or increasing the returns of value addition and these include niche marketing, direct marketing, open market access and direct distribution and conventional marketing. The shifting emphasis from a selling made tea or bulk tea to value added tea could not only prove more productive but could also ensure the profitability of the firm. For this to be fully achieved the tea estate has to augment all other strategies otherwise in the long term it will succumb. Furthermore, to enhance the performance of the value added tea production, more efforts need to be made in strengthening the basis of competitive advantage. By so doing the firm will be able to survive in the market as well as to maintain a superior performance.

## **5.4 Limitations to the study**

### **5.4.1 Time**

Time was always a constraint as it was difficult to make specific appointment dates with the key informants citing that they had other commitments of higher priority.

### **5.4.2 Resources**

The resources were limited and at times they were not available when needed. These resources include, transport and stationery.

### **5.4.3 Other challenges**

The records were not kept in one place. Some of the documents had to be collected from Polokwane. Furthermore, the records for the years 2004 going backwards were not available due to the fact that the tea estate was under a different ownership. In that regard some of the documents were not handed over to the new owners.

## 5.5 Policy implications



The management of the tea estate are feeling a full impact of the total control of the government in the tea estate. This inhibit an element of creativity and growth among the tea estate management. From the study it can be seen that there is an element of dependency syndrome in the tea estate knowing that the government will come and chip in. Bearing this in mind the government should remove blinkers or should have minimum control on the tea estate as far as initiatives are concerned. The government should also encourage the consumption of locally made tea and reduce imports. About 90% of tea that is consumed in South Africa is imported (Limpopo Business, 2009).

## 5.6 Future Research Opportunities

There is need for more research to investigate:

- a. Marketing challenges of value added tea
- b. Impact of government control in tea estates initiatives
- c. Constraints and challenges facing tea estates
- d. Socio-economic impact of the tea estate initiatives.

## 5.7 Summary and Discussions

One should be aware that the risk in starting a value-adding business is very high. During the early years the start-up costs can make it difficult to realise profit. It is important that each producer must decide how much risk is incurred if the opportunity is pursued compared to the risk if the opportunity is not pursued and make a choice based on expected risk and return outcomes and risk preferences. In the case of Tshivhase/ Mukumbani tea estates, the tea estate was abandoned and the tea bushes had grown out without being monitored. In this scenario whoever who would want venture into that business, should be ready to incur the high costs associated with its maintenance such as pruning and skiffing of the tea bushes.

It appears that the implementation of inappropriate policies has largely contributed to dragging the tea estate down to a very poor cost position compared to other tea producing companies. All in all, the tea estate is faced with a vast of problems and

constraints that greatly hampered the performance of the firm. It is of importance to utilise the resources at disposable, efficiently and effectively, which Tshivhase/Mukumbani tea estates has failed to do over the past 5 years. This is clearly evident from its increasing cost compared to the benefits accrued thereof. Since the inception of value addition in 2008, the tea estate still sells a greater proportion of its tea as bulk or made tea and value added tea products were shown to be minimal. This clearly indicates that the tea estate is plagued by problems not only in production but also in marketing. All these factors have contributed to the precarious condition of the firm. Therefore it is very vital that the tea estate adopts a better strategic focus to ensure survival more especially looking at the increasing cost of production visa-a- viz the income generated from the sales of tea.

From the results stated in the previous chapter, most importantly the tea estate needs productivity improvement, especially with respect to land and labour. It should be noted that these remedies or measures take time to implement and to become effective.

From the results in the study, it shows that the tea estate had the capacity to produce more value added tea, but was constrained by the limited demand, constricted market, financial problems, high labour costs, high cost of production and intermittent strikes by its workforce. The major blow that hit the tea estate was its own brand promotion has been seriously hampered by the financial constraints of the firm due high escalating cost emanating from labour production.

UNIVEN LIBRARY  
Library Item : 20141283



## References

- ERS/USDA*. (2002, June). (F. M. Spreads, Producer, & Farm-to-Retail Price Spreads for Individual Food Items) Retrieved May 24, 2012, from Animal Products Branch, Economic Research Service:  
<http://www.ers.usda.gov/Briefing/FoodPriceSpreads/spreads/table1a.htm>
- How to conduct a focus group. (2005). Elliot and Associates. Retrieved August 06, 2012, from  
[http://assessment.aas.duke.edu/documents/How\\_to\\_Conduct\\_a\\_Focus\\_Group.pdf](http://assessment.aas.duke.edu/documents/How_to_Conduct_a_Focus_Group.pdf)
- Ministry of Industry and Commerce*. (2006). Retrieved October 10, 2011, from  
<http://www.industry.gov.lk/web/index.php?option=com>
- Limpopo Business*. (2007). Retrieved July 21, 2011, from Limpopo Business Directory:  
[http://www.limpopobusiness.co.za/pls/cms/ti\\_company\\_search\\_azdirectory\\_provp\\_site\\_id=129\\_template\\_Limpopo\\_Business\\_Directory.htm](http://www.limpopobusiness.co.za/pls/cms/ti_company_search_azdirectory_provp_site_id=129_template_Limpopo_Business_Directory.htm)
- Management study guide*. (2008). Retrieved August 22, 2012, from Management study guide: <http://www.managementstudyguide.com/measuring-financial-benefits-of--six-sigma.htm>
- South African Breweries plc (2002)*. Corporate Accountability Report.
- SouthAfrica.info*. (2008, October). Retrieved May 22, 2012, from South Africa's farming sectors: <http://www.southafrica.info/business/economy/sectors/542547.htm>
- Limpopo Business*. (2009). Retrieved August 21, 2011, from Limpopo Business:  
[http://www.limpopobusiness.co.za/pls/cms/ti\\_company\\_search\\_company\\_display](http://www.limpopobusiness.co.za/pls/cms/ti_company_search_company_display)
- DAFF*. (2010). Retrieved August 21, 2011, from Department of Agriculture Forestry and Fisheries: [http://www.daff.gov.za/docs/AMCP/Black\\_Tea\\_MVCP\\_2010-2011.pdf](http://www.daff.gov.za/docs/AMCP/Black_Tea_MVCP_2010-2011.pdf)
- Industrial Development Corporation*. (2011). Retrieved August 13, 2012, from Revitalising local economic potentials: Greater Tzaneen Economic Development Agency (GTEDA) in Limpopo:  
[http://led.co.za/sites/led.co.za/files/cabinet/development\\_agency/gteda\\_case\\_study\\_-\\_draft\\_.pdf](http://led.co.za/sites/led.co.za/files/cabinet/development_agency/gteda_case_study_-_draft_.pdf)

- TMSA. (2011, August 26). Retrieved February 29, 2012, from TradeMark Southern Africa:  
<http://www.businessdailyafrica.com/Tea+board+eyes+processing+zones+to+boost+earnings+/-/539552/1225190/-/int68yaz/-/index.html>
- Amanor-Boadu, V. (2000). *Trade Liberalization and the WTO Negotiations after Seattle*. Guelph: George Morris Centre.
- Amanor-Boadu, V. (2004). *A Conversation about Value-Added Agriculture*. George Morris Centre.
- Argenti, P. (1994). *The Portable MBA Desk Reference: An Essential Business Companion*. Wiley, New York , NY.
- Baker, M. (1985). *Macmillan Dictionary of Marketing and Advertising*. London: The Macmillan Press Ltd.
- Baker, M. (1999). *The IEBM Encyclopedia of Marketing*. London: International Thomson Business Press.
- Bishop, R. (1993). Economic efficiency, sustainability and biodiversity. *Ambio*, 22(2-3), 69-73.
- Boardman, N. (2006). *Cost-benefit analysis, concepts and practice* (3rd ed.). Upper saddle River: Prentice Hall.
- Chang, L. (1995). Niche marketing for small business exporters. In P. Grub, & T. Moran, *Global business strategies for the year 2000* (pp. 44-57). Washington D.C: Beacham Publishing Inc.
- Choudhury, D. R. (2006, November 16-30). India's Tea Industry and Assam. *Access North East*, 3:15. India.
- Chung, K. (1969, June). "A Markov Chain Model of Human Needs: An Extension of Maslow's Need Theory,". *The Academy of Management Journal*, 12(2), 223-234.
- Coltrain, D., Barton, M., & Boland, M. (2000). *Value added: Opportunities and Strategies*. Arthur Capper Cooperatiive Center, Cooperative Extension Service, Department of Agricultural Economics: Kansas State University.
- Correia, R., Flynn, D., & Uliana, E. &. (2007). *Financial management* (6th ed.). Cape Town: Juta.

- Costanza, R. (2001). Visions, values, valuation and the need for ecological economics. *BioScience*, 51(6), 459-468.
- Currie, B. (2008, March 28). Cost-benefit analysis of land restoration in the assegaibos catchment area with regard to water yield and tourism benefit. (Masters Thesis). Cape, Nelson Mandela Metropolitan University.
- De Silva, S., & Herath, H. (2011). Strategies for competitive advantages in Value Added Tea Marketing. *Tropical Agricultural Research*, 22(3), 251-252.
- Department of Environmental Affairs and Tourism. (2004). *Cost benefit analysis*. Integrated Environmental Management Information Series 8. Pretoria: Department of Environmental Affairs and Tourism.
- Emery, D., & Finnerty, J. (1997). *Corporate Financial Management*. Prentice Hall, Upper Saddle River, NJ.
- European Commission Directorate Regional Policy. (2008). *Guide to Cost-Benefit Analysis of investment projects: Structural Funds, Cohesion Fund and Instrument for Pre-Accession*. European Commission.
- Fleming, K. (2005). *Value-Added Strategies: Taking Agricultural Products to the Next Level*. College of tropical agriculture and human resources, University of Hawaii at Manoa, Department of Tropical Plant and Soil Sciences. Manoa: University of Hawaii at Manoa.
- Friedman, L. (1984). *Microeconomic policy analysis*. USA: McGraw-Hill Book Company.
- Gittinger, J. (1982). *Economic analysis of agricultural projects* (2nd ed.). Baltimore: The Johns Hopkins University Press.
- Goodstein, E. (1999). *Economics and the environment* (2nd ed.). New York: John Wiley & Sons.
- Hanley, H. &. (1993). *Cost-benefit analysis and the environment*. Aldershot: Edward Elgar.
- Hansjurgens, B. (2004). Economic valuation through cost benefit analysis- possibilities and limitations. *Toxicology*, 205(3), 241-252.
- Harris, T. (1998). *Value-Added Public Relations: The Secret Weapon of Integrated*. Lincolnwood, IL: NTC Business Books.

- Helfert, E. (1997). *Techniques of Financial Analysis: A Practical Guide to Managing and Measuring Business Performance*. Irwin, Chicago, IL.
- Ial, K. (1999, June). "Value Added by Industry – A Problem of International Comparison," .  
Statistics Canada.
- Ja afar- Furo, M., Bello, K., & Sulaiman, A. (2011). *Assessment of the prospects of value addition among small-scale rural enterprises in Nigeria: Evidence from North-eastern Adamawa*. Adamawa State University, Bauchi State Development Programme, Department of Agricultural Economics and Extension, Department of Planning, Monitoring and Evaluation, Mubi, Bauchi, Nigeria.
- Karmakar, K., & Banerjee, G. (2005). *The tea industry in India: A survey*. Mumbai, India: National Bank for Agriculture & Rural Development, Department of Economic Analysis and Research.
- Kotler, P., & Armstrong, G. (1995). *Principals of marketing*. New Delhi: Prentice-Hall.
- Krueger, R. (1994). *Focus groups: A practical Guide for applied Research*. Thousand Oaks: Sage Publications.
- Kvale, S. (1996). *Interviews: An Introduction to Qualitative Research Interviewing*. Sage Publications.
- Linn, M. (2010). Cost-benefit analysis: a primer. *The Bottom Line: Managing Library Finances*, 23(1), 31-36.
- Linn, M. (2011, February). Cost-benefit analysis: examples. *The Bottom Line: Managing Library Finances*, 24(1), 68-72.
- Markandya, A., Perelet, R., & Mason, P. &. (2002). *Dictionary of environmental economics*. London: Earthscan Publications.
- Mosoma, M., Belete, A. S., & Masuku, M. (2012, February 16). The Economics of Smallholder Dairy Goat production in Mafele Community of Limpopo Province South Africa. *Asia Journal of Agricultural Sciences*, 4(2), 153-157.
- Nilson, T. (1998). *Competitive Branding: Winning in the Marketplace with Value-Added Brands*. New York: John Wiley & sons.



- Porter, M. (1980). *Competitive strategy: Techniques for analysing industries and competitors*. New York: The Free Press.
- Porter, M. (1985). *Competitive advantage*. New York: The Free Press.
- Prest, A., & Turvey, R. (1965, Dec). Cost Benefit Analysis: A survey. *The Economic Journal*, 75(300), 683-735.
- R.M, G. (1991). The resource-based theory of competitive Advantage: Implications for strategy formulation. *California Management Review*, 33(3), 114-135.
- Saman, K. (2010, March). The Case for Liberalization of Tea Imports for Increasing Value Addition and Enhancing Tea Exports of Sri Lanka. Sri Lanka.
- Shim, J., & Siegel, J. (1989). *Encyclopedic Dictionary of Accounting and Finance*. Englewood Cliffs: Prentice Hall.
- The Standard Bank of South Africa Limited. (2013). *Finance and Farm Management* (5th ed.). Johannesburg, Gauteng, South Africa: Standard Bank Agribusiness SA.
- Van Wilgen, B. L. (1998). Ecosystem services, efficiency, sustainability and equity. *Trends in Evolution and Ecology*, 13(9), 378.
- Wal, S. v. (2008). *Sustainability Issues in the Tea Sector*. (J. Turner, Ed.) Amsterdam, Netherlands: Stichting Onderzoek Multinationale Ondernemingen.
- Ware, A. (1999). Retrieved October 16, 2011, from "Value-Added Opportunities for Small Farmers.": <http://warp.nal.usda.gov:80/afsic/nsfc/2iie2.htm>
- Wenner, R. (2011). "The Deep Roots of Vietnamese Tea: Culture, Production and Prospects for Development". ISP Collection, Paper 1159, [http://digitalcollections.sit.edu/isp\\_collection/1159](http://digitalcollections.sit.edu/isp_collection/1159).
- Wolfe, C. (1999). "What exactly is "Value Added" Anyway?" Canadian Agriculture at a Glance. Statistics Canada.
- www.oasas.ny.gov. (2009). Key Informant Interviews. Retrieved August 06, 2012, from [http://www.oasas.ny.gov/prevention/needs/documents/Key\\_Informant\\_Interviews.pdf](http://www.oasas.ny.gov/prevention/needs/documents/Key_Informant_Interviews.pdf)

Zylicz, T. (1995). Goals, principles and constraints in environmental policies. In F. H. H. Gabel, H. Opschoor, & E. Elgar (Ed.), *Principles of environmental and resource economics: a guide for students and decision makers* (pp. 155-176). Cheltenham.

| Date and time of visit | Date | Time |
|------------------------|------|------|
| Place/industry         |      |      |
| Industry/sector        |      |      |
| Name of business       |      |      |

**QUESTIONS**

1. How long in your experience do you think the benefits of value addition outweigh the costs?  
.....  
.....
2. What were your targets before and after value addition and how did it impact your business?  
.....  
.....
3. What are the value addition activities being conducted?  
.....  
.....
4. What opportunities do you obtain in pursuing value addition?  
.....  
.....
5. If you were to make a business decision and why?  
.....  
.....
6. What are the requirements of value addition?  
.....  
.....

## Appendix A: Key informant interview guide

|                            |      |      |
|----------------------------|------|------|
| Name of the tea estate     |      |      |
| Date and time of interview | Date | Time |
| Place of meeting           |      |      |
| Name of facilitator        |      |      |
| Name of recorder           |      |      |

### KEY INFORMANT

1. According to your experience do you think the benefits of value addition outweigh its costs?

.....

.....

.....

2. What were your targets before and after value addition and how did it impact your business?

.....

.....

.....

3. What are the value addition activities being conducted?

.....

.....

.....

4. What opportunities did you obtain in pursuing value addition?

.....

.....

.....

5. Is value addition a sound investment decision and why?

.....

.....

.....

6. What are the shortcomings of value addition?

.....  
.....  
.....

7. What were the training needs you found necessary for your staff when you decided to embark on value addition?

.....  
.....  
.....

8. What advice will you give to individuals or organisations who would want to embark on value addition?

.....  
.....  
.....

9. What are the marketing strategies you used before and after the value addition initiative and what inform you to adopt the new strategies?

.....  
.....  
.....